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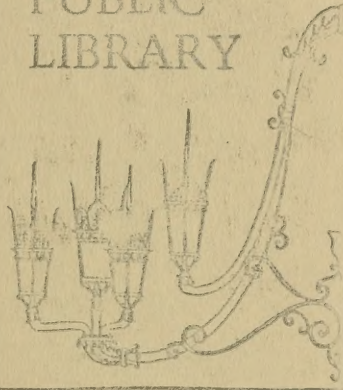
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THE  
AGRICULTURAL INDEX

SECOND THREE-YEAR CUMULATION

[SIXTH ANNUAL VOLUME]

1919—1921

SUBJECT INDEX TO A SELECTED LIST OF  
AGRICULTURAL PERIODICALS, BOOKS, AND BULLETINS

EDITED BY  
FLORENCE A. ARNOLD

NEW YORK CITY  
THE H. W. WILSON COMPANY

1922

H. A.



THE  
AGRICULTURAL  
INDEX

THE

# AGRICULTURAL INDEX

SECOND THREE YEAR CUMULATION

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1919-1921

Printed in U. S. A.

JOHN A. HENRY

NEW YORK CITY  
THE A. S. WATSON COMPANY



## PREFACE

This volume, completing the sixth year of the Agricultural Index, is the second three-year cumulation and covers the years 1919, 1920 and 1921.

According to the regular plan of cumulation, this volume is published instead of the annual volume for 1921. It contains references for the three years 1919-1921 inclusive, and, therefore, supplants the annual volumes for 1919 and 1920. It is now necessary to consult only two alphabets for references to all journals indexed since 1916.

There are now one hundred twenty-eight agricultural periodicals indexed regularly. Seventy-eight journals were included at the end of the first three-year period. The number continued the same thru the year 1919. In 1920, twenty-two periodicals were added to the list, followed in 1921 by the addition of twenty-eight more.

Not all of the magazines on the present list are indexed, therefore, for the full three-year period. Information, giving the volume numbers of the journals indexed and the inclusive years covered, has been added in the "List of Periodicals Indexed."

A complete list of the regular bulletin and pamphlet material indexed in this volume is included in the lists of experiment, department and extension literature respectively. The "occasional material" indexed for the three years is listed in the Checklist.

Agricultural books were included for the first time during the year 1921. They are listed in the main alphabet under subject, the difference in the form of the entry, author followed by title, distinguishing them from the regular periodical references.

A department for critical reviews for a selected list of agricultural books was begun in 1921. The reviews included for the year are cumulated in one alphabet in this volume.

Grateful acknowledgement is made to all those friends of the Agricultural Index who have given of their assistance and advice during the three years; to Miss Claribel R. Barnett to whom we are indebted for the Agricultural Library Notes each month; to Miss Hazel Lewis who has given invaluable assistance in reading the galley proofs for this volume and to Miss Irene Hartmann, Miss Angelina Vasti and Miss Sophia Woods who have worked long and faithfully to make this volume an accurate record.

June, 1922.

F. A. A.



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# PREFACE

The present volume is the first of a series of three, the second and third volumes being devoted to the years 1922 and 1923. It contains the results of the researches of the author and his colleagues in the field of the history of the Republic of China, and is intended to be a contribution to the knowledge of the country and its people. The volume is divided into two parts, the first dealing with the general history of the country, and the second with the history of the Republic of China.

The first part of the volume is devoted to the general history of the country, and is divided into three sections. The first section deals with the early history of the country, from the time of the first settlement of the land to the establishment of the Republic of China. The second section deals with the history of the country from the establishment of the Republic of China to the present time. The third section deals with the history of the country from the present time to the future.

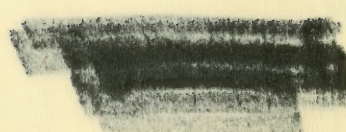
The second part of the volume is devoted to the history of the Republic of China, and is divided into two sections. The first section deals with the history of the Republic of China from its establishment in 1911 to the present time. The second section deals with the history of the Republic of China from the present time to the future.

The volume is intended to be a contribution to the knowledge of the country and its people, and is intended to be a source of information for the student and the researcher. It is intended to be a volume of reference, and is intended to be a volume of interest to the general reader.

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# Agricultural Book Reviews

1921

**ABEL, MARY HINMAN.** Successful family life on a moderate income. '21 Lippincott \$2 21-16194

"Successful Family Life on a Moderate Income" by Mary Hinman Abel is a book which will be of interest not only to the men and women included in the class studied but also to professional students of family life. Emphasis is laid on the importance of a good start in married life, free from debt, as a foundation for future success. Much space is given to the discussion of the woman's contribution, both as an economic force and in other ways, especially in the training of young children in household tasks. The budget plan is treated in detail, of course. An interesting chapter compares the histories of seven families to show how each one plans or does not plan,—families with smaller incomes getting more out of life by planning than those with larger salaries and no future hopes to save for. In conclusion the author says that ample courses in home-making are needed and a wiser training in spending. There is a list of questions at the end of each chapter for those using the book for study and the volume is indexed.

"An excellent contribution to our home economics literature.

We have needed such a book for a long time. We need more and more of them for the home-makers, both men and women, who are diligently seeking definite aid in their home-making problems. This is not a book of mere directions. It is that much greater thing, an inspiring, helpful discussion of the meaning of family life and the basis upon which it rests as a successful enterprise."—J Home Econ

**AGRICULTURAL** and home economics leaders, United States and Canada, Directory of. 3d ed '21 William Grant Wilson, 51 Chestnut st., Cambridge, Mass. \$10 with supplements; \$5 without supplements

This annual directory service consists of a cloth bound volume of 448 pages and state supplements issued at intervals during the year. It is a truthful record of the names and addresses of more than 10,000 readers in agriculture and home economics—a big force of experienced men and women instructors and advisors. Their duties are educational in nature and their work is conducted by meetings, demonstrations, consultations, and farm and home visits.

**ARNOLD, JACOB HIRAM.** Farm management. '19 Macmillan \$1.25 19-12269

Deals with the principles of farm management so far as they have been enunciated, and though it is only small and printed in large type, it contains much that will interest the farmer as well as the student of agriculture. An inquiry is recorded as to the rate of interest earned on farms in three states of the corn belt: for "landlord's" expenditure the annual return was 3½ per cent., and in an exceptionally good region 5½ per cent., after allowing 800 dollars for management salary; this, the author states, "probably represents about what the best general farms are doing." An interesting historical summary traces the development of American agriculture during the last 300 years, and shows that American farm practice is largely derived from English agriculture, modified, however, by the experience of the Indians.—Nature

**BABBITT, SHIRLEY DARE, AND WIMBERLY, LOWRY CHARLES,** eds. Essays on agriculture. \$1.50 '21 Doubleday 630.4 21-19364

This collection of essays on agriculture is intended for use as illustrative material in courses in composition in agricultural colleges. Some of the essays have historical value, some are literary in character, others are technical or practical. The collection begins with an essay on farming by Ralph Waldo Emerson and closes with an extract from Xenophon. Between these are represented such a range of writers as Liberty H. Bailey, Mrs Schuyler Van Rensselaer, Theodore Roosevelt, Kenyon L. Butterfield, David Houston, Edwin T. Meredith, Herbert Hoover, Thomas H. Huxley, Charles Darwin, George Washington and Abraham Lincoln.—Book Review Digest

**BENNETT, HUGH HAMMOND.** Soils and agriculture of the southern states. '21 Macmillan \$3.50 21-1365

"It is the purpose of this volume to describe the important agricultural lands of the southern states; to tell, in so far as space and the information at hand permit, what the soils are, where they occur, what crops they are used for, what crops they may be used for, what methods of soil treatment are employed on them, and what methods are essential to their most efficient use." (Intro.)

"Mr Bennett, who is connected with the Bureau of Soils of the United States Department of agriculture, has employed the results of investigations of that bureau over a great many years. After a general introduction, he takes up his topic by geographical divisions and subdivisions. The book is not too technical in treatment for the general reader; the more complex chemical problems have been avoided. Advice is given for the most efficient farming of soils in every locality. A valuable map is included, and in an appendix are a great number of tables of soils for easy reference and of crop results attained in various localities."—Literary Review

**BOYLE, JAMES ERNEST.** Rural problems in the United States. (Nat. social sci. ser.) '21 McClurg \$1 21-3976

"That which is set down in this volume is apparently designed as first-aid to the large and confused classes of general readers who know, from their newspaper headlines and from occasional magazine articles, that something big is going on in that region of America which lies between the cities, and who want to know just what it is all about. This book tells them, directly and simply.

For that reason it is to be recommended to another large class, hardly less confused; to agricultural students, workers, and enthusiasts who know a good deal about rural life in all its phases, and about what must be done to set this and that right."—Cornell Countryman

"The addition of a volume on rural social problems to this excellent series will be widely welcomed, the more so since Professor Boyle, professor of agricultural economics of Cornell University, has performed the task admirably within the limits set. This is especially true of the chapters dealing with the rural institutions in which, drawing on many



**BOYLE, JAMES ERNEST—Continued**

interesting personal experiences, he sets forth programs and criticisms that are both sound and stimulating. Not so happy is his exposition of the more fundamental economic problems which to many will seem not only overcondensed but ultra-conservative. We cannot agree, for instance, that a seasonal exchange of labor between farm and city is "the final solution" of the agricultural labor problem. Nor do we think that the author is quite fair in ascribing the "farmers' movements" of recent years to self-seeking outsiders whose one aim is that of creating suspicion, misunderstanding and ill-will between the farmer and his banker. The wholesale exoneration of the middle-man from the charge of profiteering also is too light and off-hand to carry conviction."—Survey

**BRUESS, CHARLES THOMAS.** Insects and human welfare. '20 Harvard univ. press \$2.50 21-1364

A very readable collection of five chapters designed to introduce the general public to the principles and practices of economic entomology, especially in their biological relationships, being, as the cover page advertises, "an account of the more important relations of insects to the health of man, to agriculture, and to forestry."

Part of the material appeared originally in the *Scientific Monthly*.

The major part of the book is directly valuable to all interested in home economics. Though popularly written, the reader is surprised on completing the book, to find what a wide range of useful as well as interesting information he has acquired.

The lack of an index is unfortunate, especially in a book containing so much that will be new to its readers.—J Home Eeon

**BUELL, JENNIE.** Grange master and grange lecturer; with an introduction by Kenyon L. Butterfield. (Farmers' bookshelf) '21 Harcourt \$1.50 21-15180

"The Grange master and the grange lecturer is written for the purpose of pointing out the scope of the work which the organization known as the Grange undertakes and to show how, by its very nature, it tends to cultivate and encourage the higher mental and social attributes of men and women who live on farms.

It contains a brief sketch of the causes that prompted the forming of such an organization among and by farmers; and it recounts some of the Grange's early history as a basis for the later parts of the book which deal more specially with methods of developing the human material which a country neighborhood offers to a Grange. It is a close-at-hand account of how the Grange affords an ideal plan for thus sowing the seed, nurturing the growing crop and, finally, harvesting the yield of those human traits and talents which develop best under favorable encouragement. But it goes further than to depict the plan to those who have hitherto known little or nothing of the Grange; it attempts to put practical instructions and helps drawn from experience into such form as to be a guide to those who may be elected officers of a Grange.

The province of a Grange Master is set forth as a field of administrative opportunity of a high type,—one in which the right man, growing in his job, exerts an influence that may be far-reaching and of tremendous import. Grange Lecturers will find in this book a sympathetic statement of what confronts them when elected to this office; but, also, beside its obligations and difficulties, are placed the wide opportunities and rich personal returns that wait upon zealous efforts. Program building is assumed to be something akin to a genuine profession. The author has made an effort to anticipate and answer all those questions that arise in the mind of a new Lecturer of a Subordinate Grange when he begins to make and conduct programs."—Editor's preface. K. L. B.

**BURNHAM, ATHEL CAMPBELL.** Community health problem. '20 Macmillan \$1.60 21-251

The book is a complete survey of the community health problem and of the growth, present status and future possibilities of the federal health service. Its object is to give medicine in its relation to community health to the welfare worker, public health nurses, practicing physicians and all those interested in the community welfare movement. Contents: The health of the community; Sickness as a cause of poverty; The private physician and community health; Health departments and community health; The public health nurse; The campaign for better health; Workmen's compensation insurance; Compulsory health insurance; Industrial medicine; State medicine; Health centers; The social unit experiment; Tuberculosis; Social hygiene in its relation to community health; Rehabilitation of the disabled; Endowed health demonstrations; References to recent publications; and index.—Book review digest.

**BURR, WALTER.** Rural organization. '21 Macmillan \$2.25 21-14308

"The work presented here is the result of the author's experience in rural organization in local communities, first as a local leader and later as a rural organization specialist on the federal and state cooperative basis. As a part of that experience the author made a careful study of many types of rural work throughout the United States, and has kept in touch, in so far as possible, with rural development abroad. His purpose has been to secure the best for those communities for which he has felt a special responsibility."

Contents: Pt I, General principles, organizations and institutions: The rural community; Typical organizations of national scope; Relationship of permanent community institutions; Pt II, Community economic functions; Farm production; Marketing; Securing supplies; Finance; Communication and transportation; Pt III, Community social functions; Education; Sanitation and health; Recreation; Beautification; Home-making.

**DUNCAN, CARSON SAMUEL.** Marketing; its problems and methods. '20 Appleton \$3.50 21-103

Contents: Introduction; Part 1, Raw materials and foodstuffs; Analysis of the commodity; Analysis of the market; Trade organization; The middleman; Transportation; Organized exchanges; The warehouse; Commercial grading of commodities; Trade information; Market price; Financing distribution; Part 2, Manufactured products; Analysis of commodity; Analyzing the market; Distributive organization; "New type" retailers; Business policies; Defending and extending the market; Sales organization; Economics of advertising; Merchandising costs and prices; Merchandising and social control.

"It may be news to not a few of our readers that the problems and methods of marketing are actually taught in American schools and colleges. The material of Dr Duncan's book has been largely accumulated through years of teaching classes in marketing. It is a broad survey, intended to serve as a foundation for more specialized studies. It is based on actual business experience." Review of reviews

"The first book to cover thoroughly the marketing of manufactured goods, as well as of raw materials and farm products. To those interested in the warehouse, transportation, exchange, advertising, and any other agency of distribution, the practical value of the book will be evident."—Publisher.

Dr Duncan was formerly assistant professor of Commercial organization in the University of Chicago

**EDDY, WALTER HOLLIS.** The vitamin manual. '21 Williams & Wilkins co. \$2.50 21-17203

The presentation of essential data concerning vitamins to succeeding groups of students has become increasingly difficult with the development of research in this field. The literature

itself has assumed a bulk that precludes sending the student to original sources except in those instances when they are themselves to become investigators. The demand on the part of the layman for concise information about the new food factors is increasing and worthy of attention. For all of these reasons it has seemed worth while to collate the existing data and put it in a form which would be available for both student and layman. Such is the purpose of the Vitamine manual.

No apologies are made for data which on publication shall be found obsolete. The whole subject is in too active a state of investigation to permit of more than a record of events and their apparent bearing. Whenever there is controversy the aim has been to cite opposing views and indicate their apparent value, but with full realization that this value may be profoundly altered by new data. Attempt has been made to cover all the important contributions up to April, 1921. Opportunity has permitted the inclusion of certain data of still later date and undoubtedly other important papers of earlier date will have been overlooked.—Publishers' note

Contents: Pt I, How vitamins were discovered; Pt II, Attempt to determine the chemical nature of a vitamin; Pt III, Methods used in testing vitamins; Pt IV, Yeast test for vitamin "B"; Pt V, Sources of the vitamin; Pt VI, Chemical and physiological properties of the vitamin; Pt VII, How to utilize the vitamin in diets; Pt VIII, Avitaminoses or the diseases that result from vitamin deficiencies.

**ERDMAN, HENRY ERNEST.** Marketing of whole milk. '21 Macmillan \$4 21-12290

Dr. Erdman's book deals fully with every aspect of milk from the time it leaves the cow. He treats of its place as a food and as an agricultural product; of the modern government standards set for its purity; of its collection, railway transportation and urban delivery; of the various methods of fixing prices; and of the rise of collective bargaining. Nowhere has the problem of obtaining milk at a fair price to dairymen, distributor, and consumer been solved and Dr. Erdman states that he does not believe it can be solved so long as a triangular warfare among the three interests continues. He believes that the best present remedy is a combination of collective bargaining and a State commission to keep rates within proper bounds.—Lit R

"His work is a competent survey of a field which has an extensive literature, and clearly emphasizes the commonsense economic principles which govern the milk business.—Lit R

**FIPPIN, ELMER OTTERBEIN.** Rural New York. (Rural state and province ser.) '21 Macmillan \$2.50 21-5864

"Hereby is projected a new line of books to be known as the Rural State and Province series. These books are to present the rural phase of the development of the commonwealths, with so much of the physical setting and history as will make plain the reasons for the present state of the agriculture and country life. The volumes are not guides to agricultural practice, not books of advice they are plainly descriptive."—Editor's preface

"Prof Fippin sketches not only the history of agriculture, but the history of the soils—a really more interesting thing. He discusses the natural resources—fish and game, mines, quarries and water supply. He analyses the plants and crops and animal industries, the markets, marketing and rural manufactures. He also dwells on the official and private organizations, including the research bureaus, with which the farmer comes in contact, the forms of government, taxation and educational provisions.

Most of the charts in the book are reproduced on too large a scale to be of value to the reader, as it is impossible to distinguish the designating signs."—Springfield Republican

Contents: Physical and climatic settings of New York; History of agriculture in New York; Soils of New York; Other resources of New York state; Agricultural industries, plants and crops of New York; Animal industries of New York; Markets and marketing; Rural manufactures of New York; Administrative and regulatory organizations of New York; Educational and research organization of New York; Outlook.

**FOLGER, JOHN CLIFFORD, and THOMSON, SAMUEL MABLE.** Commercial apple industry of North America. (Rural science series) '21 Macmillan \$3.50 21-3984

Contents: Importance and history of the apple industry; Leading apple regions of the United States; Commercial apple production in Canada, Australia and New Zealand; Locality and site for the commercial orchard; Farm-management phases of apple-growing; Establishing the apple orchard; Cultivation of the orchard; Irrigation; Fertilizing the commercial apple orchard; Diseases and pests of the apple and their control; Fruit setting and pollination; Pruning and thinning; Renovation of old orchards; Handling the crop; Marketing and storage; Yields; By-products of the apple industry; Cost of production; Varieties of apples.

The book is an intensive survey of apple production and marketing. Individual regions are carefully analyzed, and individual varieties of fruit are described and discussed in relation to the various districts. There is, of course, a full account of diseases and pests of the apple. The information is practical and seems to be adequate.

J. C. Folger, Assistant secretary International apple shippers' association, and S. M. Thomson, formerly Fruit crop specialist, United States Department of agriculture.

**FRIESE, JOHN FRANK.** Farm blacksmithing; a textbook and problem book for students in agricultural schools and colleges, technical schools and for farmers. '21 Manual Arts Press, Peoria, Ill. \$1.25 21-13975

"This book is the direct outgrowth of the author's experiences in teaching farm blacksmithing to farm boys. The objects, of which the process of making is described in the book, all center about farm activities.

The purpose of the book is two-fold. It is intended as an aid to a teacher of farm blacksmithing, being a source of problems, and suggestive of how the work may be carried forward.

In addition to being a "What" and "How" book for instructors, the author constantly had in mind its direct use by farmers as a means of self-instruction in blacksmithing. This accounts for certain details and some repetitions. Because of its intended use as a book of self-instruction the author has taken little for granted. . . . "The dimensions given on the drawings in this book are such that the work will be strong enough and of a size in general use. The sizes should, however, be modified when individual needs require. There is real value in making these new objects to dimensions, because only in that way will a person learn how to make duplicate parts for repairs.

Repair work in schools is only touched on briefly in this book. It should be stressed as much as possible, the students bringing broken parts of implements, etc., to school to repair. However, one who has forged most of the articles, as shown in this book, should be able to do almost any kind of blacksmith repair work on a farm."—Preface

**GAGER, CHARLES STUART.** Heredity and evolution in plants. '20 Blakiston \$1.25 20-13577

An expansion of several chapters of the author's "Fundamentals of Botany." It is intended for beginners and general readers, and presents in a fresh way a very readable and well-illustrated account of the phenomena of



**GAGER, CHARLES STUART**—*Continued*  
 heredity and evolution from the strictly botanical point of view. The author begins quite unexpectedly with two chapters on the life-history of a fern, and this concise account, followed by a chapter on fundamental principles, forms a background for the treatment of the subject proper. The definition of heredity as "the genetic relationship that exists between successive generations of organisms" omits to recognize the fact that the conception of heredity is fundamentally concerned with resemblances and differences as they occur in genetically related organisms. Later chapters deal with Mendelism, evolution, Darwinism, and experimental evolution. A very good balance is preserved between the historical and the descriptive methods, with a sprinkling of illustrations, the majority of which are new to text-books.

A chapter on the evolution of plants touches upon such problems as alternation of generations, evolution of the sporophyte, and the evidence from comparative anatomy, and ends with a hypothetical ancestral tree of relationships. One of the subjects best treated is that of geographical distribution, which discusses the means of dispersal, peculiarities of distribution, effects of glaciation and cultivation on distribution, endemism, the "age and area" hypothesis of Willis, etc., with numerous illustrative cases from the recent literature. The final chapters deal with the fossil record and the various hypothetical relationships of the groups of vascular plants.—Nature

**HAAS, PAUL, AND HILL, THOMAS GEORGE.**  
 Introduction to the chemistry of plant products. v. 1, 3d ed '20 Longmans \$5.50  
 21-537

"First appeared in 1913. From its first appearance it has been recognized as a book filling a long felt want. It was intended to supply the botanist, and especially the plant physiologist, with chemical knowledge and methods not found in the ordinary text-books on chemistry. It has filled its purpose admirably. Although written primarily for the plant physiologist, the avoidance of a technical method of treatment makes it a useful book for the botanist of limited chemical training, who is working on problems involving a knowledge of plant materials. Thus at the present time, when the synthetic viewpoint of botany in relation to the other sciences is coming to the front, when it is coming to be recognized that botany and chemistry must unite forces in solving many problems, the method of treatment used in the book has increased significance.

The major changes in the book have been made in the chapter on pigments. This chapter has been entirely rewritten and much new material incorporated, especially in the part dealing with chlorophyll. A few other important additions have been made to the text, and a number of references have been added to the literature, all serving to bring the work up to date. It will continue to be a book which the plant physiologist and anyone interested at all in the chemistry of plant materials will want on his shelf." S. V. Eaton in Bot Gaz 71:156 F '21

**HARDY, MARCEL E.** Geography of plants.  
 '20 Oxford \$3.00 Agr20-1835

The author of this comparatively short volume has dared much in attempting to write a brief account of the plant geography of the earth. In most works devoted to the subject authors are usually content to describe the different plant societies, such as forests, grasslands, and the like and mention a few well-known examples of each in the different countries. Schimper's monumental book on plant geography is built on this plan, but the author of the book under review boldly adopts the more interesting, if somewhat hazardous, method of taking the different continents one at a time and briefly describing the vegetation of each.

It is obviously impossible to give in a short review the scope of the book, for to do so would involve useless repetition of material from the book itself, and it were better for the prospective reader to go directly to the source. No other book in English comes within measurable distance of doing so well what it attempts to do. For here both the botanist and intelligent layman will find in plain English a readable account of the vegetation of the different parts of the earth.

So far as our own continent is concerned the treatment is all that one could expect in a book admittedly general in its scope. The different forest and grassland and desert regions of the continent are dealt with in some detail, but the chief value of the book is that it gives to those who will not or often cannot take the time to study more special works, a clear, readable, and judging by the account of our own vegetation, a reasonably accurate description of the vegetation of the earth. No specialist will go to such a book for his information, but the general botanical reader may be congratulated upon having in it the best short account of the subject that has appeared. Norman Taylor—Torreya

**HARRIS, FRANKLIN STEWART.** Soil alkali, its origin, nature, and treatment. '20 Wiley \$2.50 20-15790

"An excellent critical little book on soil alkali. The author says: 'It has been estimated that about 13 per cent of the irrigated land of the United States contains sufficient alkali to be harmful. This means that there are over 9,000,000 acres of land under present canal systems that are affected with alkali. There are many more million acres of alkaline land in the United States that do not lie under irrigation systems. The alkali problem is one of no mean importance to farmers, nor to any who are interested in the world's food supply.

In a strictly chemical sense the word alkali refers to a substance having a basic reaction. As applied to the soil, however, this restricted meaning does not hold, and alkali refers to any soluble salts that make the soil solution sufficiently concentrated to injure plants. This includes the chlorides, sulphates, carbonates, and nitrates of sodium, potassium, and magnesium, and the chloride and nitrate of calcium. The sulphate and carbonate of calcium are not sufficiently soluble to be injurious to crops. Most of the alkalies are in reality neutral salts. It may be somewhat unfortunate to use for general substances a word that has become so well established in agricultural literature that it would now be very difficult to change it.' The author also emphasizes the great number of purely scientific problems connected with alkali soils and the need of much fundamental research in this field."—Bot Gaz 71:157 F '21

The book includes 16 chapters: 1. Introduction; 2. Geographical distribution; 3. Origin of alkali; 4. Nature of alkali injury to plant; 5. Toxic limits of alkali; 6. Native vegetation as an indicator of alkali; 7. Chemical methods of determining alkalis; 8. Chemical equilibrium and antagonism; 9. Relation of alkali to physical conditions in the soil; 10. Relation of alkali to biological conditions in the soil; 11. Movement of soluble salts through the soil; 12. Methods of reclaiming alkali lands; 13. Practical drainage; 14. Crops for alkali land; 15. Alkali water for irrigation; 16. Judging alkali land.

**HARROW, BENJAMIN.** Vitamines; essential food factors. '21 Dutton \$2.50 21-2304

"This book contains 219 pages. The first half of it is devoted to the other food factors and their various interrelations. Following an exhaustive consideration of the vitamins, there are tables showing their distribution in the commoner foodstuffs, a memorandum issued by the British committee on accessory food factors in 1919 for the guidance of those engaged in administration of food relief to famine-stricken districts, and an extensive bibliography."—N Y Times

"The title is somewhat of a misnomer; for this book is a painstaking attempt to explain to the popular mind the whole question of nutrition. What the general reader most wants to know just now is what are vitamins and what is the latest knowledge about them? It is doubtful whether he will have the patience first to delve through eight chapters on fuel values, carbohydrates, fats, proteins, mineral matter, water and oxygen, the amino-acids, and the like."—Survey

**HARSHBERGER, JOHN WILLIAM.** Text-book of pastoral and agricultural botany, for the study of the injurious and useful plants of country and farm. '20 Blakiston's son & co. \$2 20-17509

A knowledge of the useful and poisonous plants on a farm is an essential part of the equipment of the agriculturist, but hitherto the requisite information has been to a large extent scattered and difficult of access. In the present volume the account of the stock-killing and poisonous American plants is thorough and comprehensive, a specially useful feature being the inclusion of methods of treatment where they are known. It is a pity the photographs of affected animals are not reproduced more clearly, as several of them fail to illustrate their point.

The crop plants are dealt with sufficiently, though briefly, and the bibliography at the end of each chapter assists the student to follow up any requisite line of inquiry. It may be suggested that in future editions an "author index" would greatly enhance the value of the book, as at present it is not always easy to determine if a reference is included. The laboratory exercises which follow each chapter are very practical and well thought out, and render the book serviceable to the private worker, as well as to the class student. The same object is attained by the inclusion of a glossary with the detailed index. Prof. Harshberger is to be congratulated on the production of a much-needed working manual, the value of which lies not only in the well-arranged and clearly written information it contains, but also in the suggestiveness which renders it adaptable for use in countries other than America.—Nature

Dr. Harshberger has compressed within small compass much useful information and references on poisonous plants, and also on the principal economic plants. The material was originally presented by him to classes of veterinary students. It will be valued, however, by anyone with some scientific education, who is interested in agriculture.—J Heredity

**HAWLEY, RALPH CHIPMAN.** Practice of silviculture; with particular reference to its application in the United States. '21 Wiley \$4 21-4176

"The subject is presented from the standpoint of the teacher and the arrangement and discussion is shaped in a manner which will be clear to the student. The topics treated are reproduction methods, clear cutting method, the seed tree method, the shelter-wood method, the selection method, the coppice method, coppice with standard method, intermediate cuttings, method of controlling cuttings, slash disposal, forest protection against forest fires, against insects, against tree diseases and domestic animals (grazing), protection against avalanches, landslides, floods and shifting sand. The author's long experience in the practical application of silviculture on forest properties and in teaching the subject, as well as his position among the leading foresters of the United States, assure the authority and value of his book." American Forestry

**HOOPER, CECIL H.** Fruit farming: practical and scientific. (2d ed) Lockwood press. 6s

Of the numerous books on fruit culture this is one of the few written exclusively for the market grower. It should therefore appeal to many people who are now taking up fruit farming or thinking of doing so. They will

be able to sift out from it a good deal of information which they cannot find elsewhere. Several of the chapters have been contributed by specialists, scientific men, and market growers, which adds to the value of the book, although it accounts for unequal treatment and overlapping. Some of these chapters are thoroughly practical and useful, others so scrappy as to be almost worthless. Facts and figures are the author's strong point, and these are just what beginners are eager to learn and have a difficulty in finding. Although many of the figures are pre-war, they do form some basis on which to estimate capital required, cost of cultivation, probable returns, etc.—Gard Chron (Lond)

**KING, LOUISA (YEOMANS) (MRS FRANCIS KING).** The Little Garden. '21 Atlantic Monthly Press \$1.75 21-17360

"The little garden, as it will be considered in these pages, means not exclusively the spaces for flowers available in a town or suburban lot. It means too, the setting for those spaces—the ground about the house, and that in which the garden lies. It is a comprehensive term, to include the planting, planning, and treatment of the whole of a piece of ground of a size to be found most generally in towns and suburbs."

"When throughout this country, the flower-garden on the farm—when the small place, well planned and planted—shall have become the rule, not the exception, we shall possess a pervading loveliness in a land where to-day such loveliness is sadly lacking. In the successful treatment of ground small in dimension, in the beautiful quality of the little garden, lies the true future beauty of America."—Preface

Contents: Situation, soil, surroundings; The plan; Enclosing the garden: the wall, the fence, the hedge; Accessories and adjuncts of the garden; Flowers in the little garden; Color in the little garden; Care of the little garden: tools, pruning, spraying.

**LAROUSSE** agricole; encyclopédie illustrée, publiée sous la direction de MM. E. Chancrin, et E. Dumont. fasc. 1-36. 33 cm. Paris, Librairie Larousse.

A new French agricultural cyclopedia which is being issued in parts containing 16 pages each. The arrangement is strictly alphabetical, the 36 parts already received bringing the work well into the letter E. It is well illustrated both by figures in the text and by colored plates. The list of collaborators includes some of the well known writers of France. The price of each part is 2 francs.—U. S. D. A. Library

**McCOLLUM, ELMER VERNER and SIMMONDS, NINA.** American home diet. '20 Frederick C. Mathews co. \$3.50 20-12627

The authors' aim in this book is to present in non-technical language for the housewife the modern theories of nutrition. In Part I considerable space has been given to a description of the results of faulty diets as observed in animal experimentation and in human nutrition. Reasons are given "for the superiority of certain combinations of foods over others" and evidence offered "that the regular use of proper combinations of our common food-stuffs is the keynote to the successful feeding of the family." It is this definite and easily understood statement of the senior author's theories of diet that has made them so widely accepted.

Part II of the book contains menus for 365 days of the year. Illustrations are also given of menus unsatisfactory for the promotion of health and of ways of modifying these by the addition of "protective foods—milk, eggs, and leafy vegetables."

The book will be exceedingly valuable to housewives and to those who are interested in giving popular instruction in the selection of food. The material is presented in a simple, definite, and interesting manner.—J Home Econ



**MACKLIN, THEODORE.** Efficient marketing for agriculture; its services, methods, and agencies. (Social sci. text-books) il Macmillan \$3 338.1 21-15705

On the ground that marketing consists in rendering essential services and that without the middleman both the producers and the consumers of farm produce are at a loss, the author undertakes to show that in the interests of all concerned these services should be rendered by the most efficient methods and by agencies which in functioning take a minimum share of the consumer's dollar. The assembling, grading and standardizing, packing, processing, transporting, storing, financing and distributing of farm products are considered in turn, and the best marketing methods, agencies and price-making systems are discussed in detail. To each chapter is added a condensed summary and a list of selected reading. There are illustrations, tables and maps and an index.—Book Review Digest

**MACLEOD, ALICE.** Pigeon raising. new ed. '20 Stewart & Kidd \$1.50

Contents: The novice and his mistakes; How I should build a pigeon plant; Costs and profits; Various breeds and their markings; Nature and habits of highbred pigeons; Breeding; Disease and feeding; Marketing, killing and curing feathers.

"For one who is seriously interested in pigeon raising as a business, the concise advice in Miss Macleod's book will be of practical value."—Nation Ap 23, 1914

**MORRIS, ROBERT TUTTLE.** Nut growing. il Macmillan \$2.50 634.5 19-19397

The object of the book is to give the essentials of nut growing—certain simple new methods of grafting and of propagation—that may serve as a guide to the general farmer and amateur garden lover and which even the professional nut grower may want to look over in order to check up some of the things he has forgotten about. Part one is devoted to general notes on the food supply. Parts two and three are given over to propagation and species and varieties. The varieties discussed are hickories, walnuts, hazels, chestnuts, pines, beech, oaks and almonds. The book is indexed and illustrated.—Book Review Digest

**RASOR, SAMUEL EUGENE.** Mathematics for students of agriculture. '21 Macmillan \$3 21-15960

"This book presents a year's work in mathematics for students taking agricultural courses in secondary, vocational, and technical schools and in colleges and universities. By omitting the more elementary or the advanced topics, as may seem desirable, or by properly selecting the exercises to be solved, the book will serve quite naturally for a half-year's work.

The modern agriculturalist must devote a larger and larger part of his time to mental activity along scientific lines. To do this rationally he must have better methods for, and more practice in, estimating, computing, and comparing the materials and processes with which he works. The object of the present text is to furnish a better basis for effecting these ends."—Preface

Contents: Drawing—Graphic solutions; Computation—Measurement; Indirect measurement—Trigonometry—Surveying; Review of algebra; Graphic representation of quantities; Graphs in algebra; Computation of logarithms; The progressions; Compound interest—Annuities—Depreciation; Averages and mixtures; Geometry—Mensuration; Oblique triangles; Land surveying; Simple machines; Composition and resolution of forces.

**RECKNAGEL, ARTHUR BERNHARD, and BENTLEY, JOHN.** Forest management. '19 Wiley \$2.50 19-12266

This book purports to provide the American reader with a condensed and not too technical account of the subjects comprised under the head of Forest management.

The subject matter is treated under the following main heads: Forest mensuration; Forest organisation (including working plans); Forest finance; Forest administration.

One hundred and twenty-two pages, or rather more than half the book, deal with the subject of Forest mensuration. Forest organisation occupies fifty-five pages, the remaining sections being more briefly dealt with.

Chapters X and XI give a short but useful account of methods of determining the increment of single trees and woods. We are bound to point out, however, that on page 116 the determination of the volume of permanent sample plots by the arithmetical mean sample tree method is open to criticism on the ground that other and more accurate methods (e.g., those of Hartig and Ulrich) have long been employed by the research stations in Europe.

British students will find chapter XV on Forest finance most useful as an introduction to a subject which is often found troublesome. In particular, the U.S.A. government's detailed instructions for calculating fire damages (on pages 201 to 208) provide interesting illustrations of the practical value of compound interest formulae in general forestry. The final chapter deals briefly with the subject of administration. We fancy that most British foresters will be surprised by the statement on page 217 that "while the average executive unit in Europe is 6,000 acres, the average unit in the United States national forests is no less than 1,022,200 acres." Any except the most extensive system of working must be out of the question with units of this size.

The book is well printed and provided with an appendix containing the usual compound interest tables and other data; there is also an excellent index.—J Min Ag

**RICHMOND, HENRY DROOP.** Practical handbook for dairy chemists and others having control of dairies. 3d ed rev '21 Lippincott \$8 [Agr21-851]

Thoroughly revised to meet changing conditions and to cover the latest researches in dairy chemistry. The book has been rearranged in order that it may have the best practical value. One of the most up-to-date and comprehensive works on the subject. Useful alike to the health official in the city or country, the head of the modern dairy, or the medical man who wishes to understand the problems of human nourishment.

Contents: Constituents of milk: fat of milk; soluble constituents; proteins; Analysis of milk and milk products; Physical determinations; Formulae of calculations; Estimation of fat; Volumetric and indirect estimation of fat; Estimation of sugars; Estimation of proteins; Analysis of milk products; Detection of added substances; Analysis of solid milk products; Analysis of cheese; Analysis of butter fat; Distillation methods; Chemical analysis of butter fat; Physical examinations of butter fat; Water analysis

Technical application; Chemical composition of milk; Milk of mammals other than the cow; Composition of milk products; Composition of cheese and fermented products; Deduction from analysis; Chemical control of the dairy; Keeping of milk; Cream, butter, cheese, etc.; Biological and sanitary matters; Standardisation and calibration of apparatus.

Numerous tables and illustrations.

**RUSSELL, HARRY LUMAN, and HASTINGS, EDWIN GEORGE.** Outlines of dairy bacteriology, a concise manual for the use of students in dairying. 11th ed '20 H. L. Russell, Madison, Wis. \$1.60 20-9831

Contents: Structure, growth and distribution of bacteria; Methods of studying bacteria; Contamination of milk; Infection of milk with pathogenic bacteria; Fermentations of milk; Preservation of milk; Bacteria and butter making; Bacteria and cheese making; Bacteria in market milk.

The book is eminently suitable for students in dairying and covers the ground in admirable fashion, without burdening the beginner with

details. The very title "Outlines" gives the keynote as stated in the authors' preface, "The aim of this volume is not to furnish an exhaustive treatise of the subject, but an outline and sufficient detail to enable the general student of dairying to obtain as comprehensive an idea of bacteria and their effects on milk and other dairy products as may be possible without the aid of laboratory practice."—Creamery

**SANDERSON, EZRA DWIGHT, and PEAIRS, LEONARD MARION.** Insect pests of farm, garden and orchard. 2d ed rev '21 Wiley \$4.50 21-6964

Mr Sanderson is professor of rural organization, Cornell University and Mr Peairs is professor of entomology, West Virginia University.

"Illustrated account of the principal insect pests. The illustrations are drawn from the most varied and authoritative sources. The text is clear and direct, and the book is eminently readable. On examining it one is at once impressed with the marvelous value of co-operation in scientific work. Here are gathered from all quarters the results of the most laborious and painstaking work of hundreds of scientific men all over the country. . . . It is difficult to see how this matter could be put into form more available for the general reader and student."—American microscopical society

Contents: Injury to crops by insect pests; Beneficial insects, predaceous and parasitic; Structure and development of insects; Farm methods for the control of insects; Insecticides; Spraying and dusting apparatus; Insects affecting grains, grasses and miscellaneous crops; Insects injurious to small grains; Insects injurious to corn; Insects injurious to stored grains; Insects injurious to clover and alfalfa; Insects injurious to tobacco; Insects injurious to cotton; Insects injurious to potatoes and tomatoes; Insects injurious to beans and peas; Insects injurious to beets and spinach; Insects injurious to cabbage and related crops; Insects injurious to melons, cucumbers, squash, etc.; Insects injurious to miscellaneous garden crops; Insects injurious to the strawberry; Insects injurious to the raspberry and blackberry; Insects injurious to the currant and gooseberry; Insects injurious to the grape; Insects injurious to orchard fruits; Insects injurious to the apple and pear; Insects injurious to the peach, plum and cherry; Insects injurious to citrus fruits; Insects injurious to man and in the household; Insects injurious to domestic animals and poultry. Bibliography.

**SHANAHAN, EDWARD WILLIAM.** Animal foodstuffs, their production and consumption with a special reference to the British Empire; a study in economic geography and agricultural economics. '20 Dutton \$5 20-7575

"This work is the result of investigations conducted at the London School of Economics, and is an attempt to survey impartially the productive resources of all important parts of the world in respect to animal foodstuffs. Throughout the whole of the investigation the close relationship between animal foodstuffs and concentrated feedstuffs has been insisted upon. The main conclusion drawn has been that the supplies of animal foodstuffs tend at present, and are still more likely in the future, to be deficient. This has led to an enquiry into the economic position of animal industries in agriculture, into their costs of production, and into the economics of consumption in relation to production in respect of them. All these have been studied in their bearing upon future movements. A distinct aim in the enquiry has been to correlate in broad outlines in one important class of goods the economics of consumption with those of production, which constitutes a new field of investigation in economic geography."—Publisher.

The book contains historical and statistical material and a general survey of the sources of production and world trade with special emphasis on production and consumption of animal foodstuffs in the British Empire.

**SMITH, ERWIN FRINK.** Introduction to the bacterial diseases of plants. il '20 Saunders \$10 20-20204

"There are many unique features about this new book. It is the first treatise of its kind, a product of the author's own researches, and it fills a need that was rapidly becoming urgent.

The subject-matter is arranged in five parts: I. A Conspectus of Bacterial Diseases of Plants, dealing with host-range, susceptibility, infection factors, incubation, recovery, agents of transmission, host-reactions, and other aspects of the science. II. Methods of Research, apparatus, culture media, technic of isolation, etc. III. Synopsis of Selected Diseases, in which the type, cause, technic, and literature for fourteen bacterial diseases are given, and for each disease so treated, a laboratory outline in the form of questions and suggestions is presented. IV. Miscellaneous, notes on additional diseases, suggestions for special study, the production of tumors in the absence of parasites, speculations on the chemical and physical stimuli underlying tumor-formation, and on the production of teratosis in the absence of tumors and of parasites. V. General Observations on experimentation, interpretation, ethics of research, and similar matters.

In a word the value of this handsome volume lies in the fact that its author who is in charge of the Laboratory of Plant Pathology, U.S. Bureau of Plant Industry, is an authority on the subject. It may as well be admitted that many Pathologists do not feel qualified to carry on research in this field, and so it is gratifying that the "father of the science of bacterio-phytopathology" has put into available form the results of his many years of experience.

The reviewer must disappoint those who have not seen this book by omitting the statement that "the illustrations are poor." On the contrary, they are excellent when considered from all points of view. The enlargements of bacterial colonies should prove of great service to anyone who desires to make comparative cultural studies. The casual observer may be led to inquire whether the number is not excessive, but the teacher and student alike may find in each one an impressive lesson.

The book fills the need of the teacher. While it is designed primarily for laboratory use, it also contains much valuable matter for supplementary reading. In a few cases fuller citations to literature would facilitate the work of the teacher. The investigator will find it an indispensable manual."—Phytopathology

**SMITH, JOHN WARREN.** Agricultural meteorology; the effect of weather on the yield of crops. (Rural science ser.) '20 Macmillan \$2.40 21-669

This book is notable as "the first text on the subject of agricultural meteorology that has ever been prepared." It is designed primarily for university and college students, but is believed to be practicable for agricultural high schools and farmers' reading courses and also of interest generally to individuals desiring information regarding the relation of climate to crops.

The book includes brief but clear and simple expositions of the essential but heretofore scattered and undigested information on the effect of weather on the growth and yield of crops; the influence of climate and weather on insect activities and the development of plant diseases; and the protection of crops, animal life, and birds from damaging meteorological phenomena. The relation of climate to crop distribution and farm operations is also discussed, and the effect of different weather factors on the yield of cotton, corn, wheat, oats, rye, potatoes, tobacco, fruit, and other crops is treated in detail.

The first chapter deals briefly with introductory meteorology, including some of the elementary and fundamental acts and principles necessary to an intelligent understanding of the subject. Succeeding chapters discuss agricultural meteorology, agricultural climatology, correlation, climate and crops, climate and farm operations, weather and crops, the effect of weather



**SMITH, JOHN WARREN**—*Continued*

on the yield of grains, the effect of weather on vegetables and miscellaneous crops, weather forecasts and warnings, frost and the protection of crops from frost damage, and value of lightning rods.

Incidentally, the book emphasizes the fact that while weather and crop yield data are abundant and easily obtained, there is great need of more systematic phenological observation. Such data as can probably be best secured by agricultural and meteorological stations in connection with the agricultural experiment stations in the principal crop-growing areas.—Exp Sta Record

**STEVENS, FRANK LINCOLN, and HALL, JOHN G.** Diseases of economic plants. rev ed '21 Macmillan \$3.90

In this just published revision, all the new knowledge concerning this most important subject that has been acquired in recent years has been incorporated. No subject assuredly is more vital than that of safeguarding the feeding of the world through plants consumed directly or through meat produced from them.

Every agriculturist, horticulturist and floriculturist would do well to master the chapter on General Diseases before studying in the book the topic of particular interest to him. He will find a most gratifying clear, concise and accurate treatment of diseases affecting the special crop, with sufficient illustrations, and references to a bibliography for more detailed investigation and the handling of the problem in varying local phases. In the bibliography are placed, in 556 different groups, the titles of the reliable treatises, most of which are fortunately in the form of free public bulletins. The index should be used to supplement the table of contents; but both the botanical and the common name, like *pæonia* and *peony*, must be looked up. In the matter of ornamental plants alone are there deficiencies; but they are to a great extent necessary deficiencies, for "aside from a few standard flowers, as, for example, roses, violets, chrysanthemums, carnations, etc., and certain nursery stock, so few individuals are interested, or the financial risk in these crops is so small, that large expenditures of public funds have not been made for investigation or control of the diseases."—Gard Chron Am

**TAUBENHAUS, JACOB JOSEPH.** Diseases of greenhouse crops and their control. '20 Dutton \$8 20-13540

Author is Chief of the Division of plant pathology and physiology, Texas agricultural experiment station, Agricultural and mechanical college of Texas.

The value of the greenhouse industry in the United States is placed, conservatively, at \$40,000,000. The average yearly losses approximate 30%. The aim of the author in writing this book has been to gather all available information on the subject of diseases of greenhouse plants and place it at the disposal of greenhouse men, research workers, and students of plant pathology.

Contents: Healthy soil; Sick soils; Treatment of sick soils; Light in its relation to greenhouse culture; Moisture and water requirements; Breaking the rest period of plants; Nature of plant diseases; Germination troubles; Beet diseases; Cauliflower diseases; Cucumber diseases; Lettuce diseases; Mushroom diseases; Parsley diseases; Radish diseases; Tomato diseases; *Aalthernanthera* diseases; Aster diseases; Carnation diseases; Chrysanthemum diseases; Cyclamen diseases; Hyacinth diseases; Lilac diseases; Orchid diseases; Primrose diseases; Sweet pea diseases; Tulip diseases; Plant pests; Greenhouse thrips; Methods of control.

**TAYLOR, ALBERT D., and COOPER, GORDON D.** Complete garden. il Doubleday \$6 21-7181

"In the case of no other book has the reviewer been disposed to give more hearty assent to what the publishers, with their very extensive knowledge and experience claim for this work: 'Whether your problem is to in-

troduce a bit of Nature into a congested city street, or to develop large areas into a harmonious landscape setting; whether you are a professional of wide experience, and with extensive grounds under your care, or the average small home owner, laying out a back yard, you will find vital information, the exact information you need, in this, the most practical and comprehensive garden book yet published."

There should even be added, to the distinguishing features of practicalness and comprehensiveness, that of saneness. In common language the work may be said to start from the bottom and to build, not upon fancies, theories or ideas, but upon knowledge of plants and their idiosyncrasies, of soils and their effects, of sites and their conditions, which vary with the weather and the seasons. No detail connected with plants other than those generally regarded as greenhouse plants only, seems to have been overlooked. There is a glossary that should be welcomed and a good bibliography which includes references to reliable articles in magazines.

A few references to the index, which, by the way, appears to contain the first publication of the names of plants as revised by the American Joint committee of Horticultural nomenclature, to such topics as annuals, bulbs and winter, would convince one of the completeness of the work. But it is not made up of isolated items like a dictionary or encyclopedia. The book is a connected and coherent whole, enjoyable to read, excepting perhaps, for some, the interspersed lists of plants, and made attractive by its many illuminative pictures, pictures in which one is enabled readily to see what is illustrated by well chosen explanations that are appended. Those in color are exquisite."—Gardeners' Chronicle

**THATCHER, ROSCOE WILFRED.** Chemistry of plant life. '21 McGraw \$3 21-991

Contents: Introduction; Plant nutrients; Organic components of plants; Photosynthesis; Carbohydrates; Gums, pectins and cellulose; Glucosides; Tannins; Pigments; Organic acids, acid salts and esters; Fats and oils, waxes and lipoids; Essential oils and resins; Vegetable bases; Proteins; Enzymes; Colloidal condition; Physical chemistry of protoplasm; Hormones, auximones, vitamins and toxins; Adaptations.

The first American textbook devoted to the chemistry of plant cell activities. The material is the development of the course in phytochemistry offered by the author for several years to the students of the Plant science group of the University of Minnesota. The book aims to furnish a proper foundation upon which to build a scientific knowledge of how plants grow.

Professor Thatcher is Dean of the Department of agriculture and Director of the Agricultural experiment station, University of Minnesota.

**VILMORIN-ANDRIEUX et cié.** Vegetable garden; descriptions, and culture of the garden vegetables of cold and temperate climates; English ed., pub. under the direction of W. Robinson, with an addendum by W. P. Thomson. 3d ed '20 Dutton \$10

"This book is generally recognized as being the most complete and authoritative of its kind. For easy reference the vegetables are arranged in alphabetical order; and under each is given a clear, concise, illustrated description, full of cultural directions, a list of varieties, and an account of the plant's uses. The present edition has been brought up to date by the inclusion of an addendum by Mr W. P. Thomson."

**WEAVER, JOHN ERNEST.** Root development in the grassland formation: a correlation of the root systems of native vegetation and crop plants. '20 Carnegie inst. \$4 20-21975

"Deals with the root development of both natural vegetation and crop plants in the grassland formation. Data are given from investigations at more than 25 stations in Colorado, Kansas, Nebraska, and South Dakota and from the Missouri River to the Rocky Mountains.

A study of nearly all the grassland dominants has been completed and more than 80 examinations of the root systems of crop plants have been made. In the area investigated, the grassland formation has been differentiated into three associations by pronounced climatic variations, especially of rainfall and evaporation. These are: (1) the true prairie (*Stipa-Koeleria* association); (2) the mixed prairie (*Stipa-Bouteloua* association); and (3) the short-grass plains (*Bulbils-Bouteloua* association).

The root systems of 43 species, 17 of which were grasses, have been examined in the true prairies; 36 species have been excavated in the hard lands of mixed prairie, and 45 in the mixed prairie of the sandhills.

Cereal crops grown at many stations in the various associations showed marked differences in root and shoot development. Root growth was greatest in true prairie (100 per cent), least in short-grass plains (51 to 79 per cent), and intermediate in mixed prairie (80 to 95 per cent). Similar correlations of root and shoot development of native grasses have been determined. Root development of crop-plants grown on upland and lowland areas in true prairie climate was found to be greater in most cases on the upland and uniformly so in comparison to shoot development. The applications of a knowledge of root habit and

development have been pointed out."—*Plant Ecology* p135 Mr 1 '21

WIPRUD. A. CLARENCE. Federal farm-loan system in operation. '21 Harper \$2 332.3 21-13422

The purpose of the book is to give reliable information about the system that is to supply the American farmers with the long-term credit which will enable them to develop and expand their farming operations. W. G. McAdoo, in his introduction to the volume, says "This great system of agricultural credit will become a very rock of Gibraltar for agricultural prosperity. If this is now supplemented by an intelligent system of warehousing, and by co-operative organizations for the financing, marketing, and distribution of farm products, a new and brighter future will open to the American farmer." The joint-stock land banks—an organization intended to complement the Federal banks—are dealt with in the appendix, which also gives the text of the Federal farm loan act.

Contents: Framework of the Federal farm loan system; Method of financing; Federal farm-loan bonds; Federal farm loans; Federal farm loans (cont); Cooperative features of the Federal farm-loan system; Service aside from making loans; Appendices





# List of Periodicals and Bulletins Indexed

## List of Periodicals Indexed

The periodicals listed below are now indexed regularly in the Agricultural Index. This list will be increased as rapidly as seems advisable, the additions being selected by vote of the subscribing libraries. All subscribers are invited to send us the names of any periodicals they would find useful if indexed.

\*One cooperator made the suggestion that it would save time for the librarian if the data regarding the publication of the title page and index were shown in this list. This information will be found below. Abbreviations are given at bottom of page.

**Acad Ag France Compt Rend**—Comptes Rendus des Seances de l'Academie d'Agriculture de France. 30 fr. Paris Académie d'Agriculture de France, 18 Rue de Bellechasse, Paris (tpi-lfn)

Vols. 6-7 (1920-1921)

**Ag B Fed Malay States**—Agricultural Bulletin of the Federated Malay States. \$5; single numbers \$1.50. Department of Agriculture, Kuala Lumpur, Federated Malay States  
Vol. 9, no. 1 (Jan.-Mar. 1921)

**Ag Eng**—Agricultural Engineering. \$3; single numbers 30c. American Society of Agricultural Engineers, St Joseph, Mich. (i-l)  
Vol. 2 (1921)

**Ag Gaz of Canada**—Agricultural Gazette of Canada. \$1; single numbers 20c. Department of Agriculture, Ottawa, Ontario (i-s)  
Vols. 6-8 (1919-1921)

**Ag Gaz of New South Wales**—Agricultural Gazette of New South Wales. Single numbers 6d. Dept. of Agriculture, Sydney, Australia (tpi-lfn)  
Vols. 30-32 (1919-1921)

**Ag J of British Columbia**—Agricultural Journal of British Columbia. \$1. Department of Agriculture, Victoria, B.C. (i-r)  
Vols. 4-6 (1920-1921)

**Ag J of Egypt**—Agricultural Journal of Egypt. P. T. 5. Ministry of Agriculture, Cairo, Egypt (i-s)  
Elected but not yet indexed

**Ag J of India**—Agricultural Journal of India. 9s 6d; single numbers 2s. Thacker, Spink & Co., Calcutta, India (i-lfn)  
Vols. 14-16 (1919-1921)

**Ag News**—Agricultural News. 4s 4d; single numbers 1½d. Advocate Co., Ltd., Broad St, Bridgetown, Barbados, (tpi-lfn)  
Vols. 19-20 (1920-1921)

**Ag R**—Agricultural Review. \$1. International Farm Congress, Kansas City, Mo.  
Vol. 13 (1921)

**Am Bee J**—American Bee Journal. \$1.50. 1st National Bank Bldg., Hamilton, Ill. (i-s)  
Vols. 59-61 (1919-1921)

**Am Coop J**—American Co-operative Journal. \$1; single numbers 10c. American Co-operative Pub. Co., 608 S. Dearborn St, Chicago (i-none)  
Vols. 14-16 (1919-1921)

**Am Fert**—American Fertilizer. \$3; single numbers 25c. Ware Bros. Co., 1010 Arch St, Philadelphia (tpi-none)  
Vols. 50-55 (1919-1921)

**Am Flor**—American Florist. \$1.50; single numbers 10c. American Florist Co., 440 S. Dearborn St, Chicago (i-r)  
Vols. 51-57 (Oct. 8, 1918-1921)

**Am For**—American Forestry. \$4; single numbers 40c. American Forestry Assn., 1214 16th St, Washington, D.C. (tpi-r)  
Vols. 25-27 (1919-1921)

**Am Fruit Grower**—American Fruit Grower. \$1; single numbers 10c. American Fruit Grower Co., Inc., State-Lake Bldg., Chicago (i-none)  
Vols. 39-41 (1919-1921)

**Am J Bot**—American Journal of Botany. \$6; single numbers 75c. American Journal of Botany, Brooklyn Botanic Garden, Brooklyn, N.Y. (i-s)  
Vols. 6-8 (1919-1921)

**Am Nat**—American Naturalist. \$5; single numbers \$1. Science Press, Garrison, N.Y. (i-s)  
Vols. 53-55 (1919-1921)

**Am Nut J**—American Nut Journal. \$2; single numbers 20c. American Fruits Pub. Co., Inc., 121-123-125 Ellwanger & Barry Bldg., Rochester, N.Y. (i-none)  
Vols. 12-15 (1920-1921)

**Am P Advocate**—American Poultry Advocate. \$1; single numbers 10c. Clarence C. DePuy, editor & publisher, 1009 S. Salina St, Syracuse, N.Y. (i-none)  
Vols. 27-29 (1919-1921)

**Am P J**—American Poultry Journal. 75c; single numbers 15c. James W. Bell & Co., 523 Plymouth Court, Chicago (i-none)  
Vols. 50-52 (1919-1921)

**Am Sheep B & W**—American Sheep Breeder and Wool Grower. \$1.50; single numbers 15c. American Sheep Breeder Co., 817 Exchange St, Union Stock Yards, Chicago (tpi-none)  
Vols. 38-40 (1919-1921)

**Am Soc Agron J**—Journal of the American Society of Agronomy. \$2.50; single numbers 35c. American Society of Agronomy, P. E. Brown, sec.-treas., Iowa State College, Ames, Iowa (i-s)  
Vols. 11-13 (1919-1921)

**Am Thresherman**—American Thresherman and Farm Power. \$1. Clarke Pub. Co., Madison, Wis. (i-none)  
Vols. 21-24 (1919-1921)

**Am Vet M Assn J**—Journal of the American Veterinary Medical Association. \$4; single numbers 40c. Journal of the American Veterinary Medical Assn., 1620 Hobart St, Washington, D.C. (tpi-s)  
Vols. 54-60 (1919-1921)

### \*Abbreviations:

- i- index.
- l sent loose in last number of volume.
- lb sent loose in first number of volume.
- lfn sent loose in a following number of succeeding volume.
- none none issued.

- r sent on request.
- s stitched in last number of volume.
- sb stitched in first number of volume.
- sfn stitched in a following number of succeeding volume.
- tp- title page.
- tpi- title page and index.



- Ann Bot**—Annals of Botany. 65s per volume. Humphrey Milford, Oxford University Press, Amen Corner, London, E.C. (tpi-s)  
Vols. 33-35 (1919-1921)
- Assn Men**—Association Men (Rural Manhood ed.) \$2.25; single numbers 20c. International Committee of Y.M.C.A.'s, 347 Madison Av, New York (i-s)  
Vols. 46-47 (1921)
- Assn Offic Ag Chem J**—Journal of the Association of Official Agricultural Chemists. \$5 per volume. Box 290, Pennsylvania Avenue Station, Washington, D.C. (tpi-s)  
Vols. 3-5 (1919-1921)
- Australian For J**—Australian Forestry Journal. 4s; single numbers 6d. Australian Forestry Journal, 25 O'Connell St, Sydney, Australia (i-s)  
Vol. 4 (1921)
- B Dept Ag Trinidad**—Bulletin of the Department of Agriculture Trinidad & Tobago. 2s; single numbers 6d. Department and Board of Agriculture, Port-of-Spain, British West Indies (i-r)  
Vol. 19, pts. 2-3 (1921)
- Banker-F**—Banker-Farmer. 60c. Agricultural Commission of the American Bankers Association, Champaign, Ill. (i-none)  
Vols. 6-8 (1919-1921)
- Better Business**—Better Business. 8s; single numbers 2s. Co-operative Reference Library, The Plunkett House, Dublin, Ireland (i-r)  
Vols. 5-6 (1920-1921)
- Better Fruit**—Better Fruit. \$1; single numbers 20c. Better Fruit Pub. Co., 12th and Jefferson Sts, Portland, Ore. (tpi-none)  
Vols. 13-16
- Bot Gaz**—Botanical Gazette. \$9; single numbers 75c. University of Chicago Press, 5750 Ellis Av, Chicago (tpi-s)  
Vols. 67-72 (1919-1921)
- Breeder's Gaz**—Breeder's Gazette. \$1. Sanders Pub. Co., 542 S. Dearborn St, Chicago (tpi-r)  
Vols. 74-80 (Sept. 4, 1918-1921)
- Cal Citrograph**—California Citrograph. \$1; single numbers 10c. California Citrograph Pub. Co., Los Angeles, Cal. (i-s)  
Vols. 5-6 (1920-July 1921)
- Cal Countryman**—California Countryman. \$1.50; single numbers 25c. College of Agriculture, University of California, 20 Agriculture Hall, Berkeley, Cal. (tpi)  
Vol. 7, no. 7 (1921)
- Cal Cultivator**—California Cultivator. \$1. Cultivator Pub. Co., Inc., Publishers Trade Bldg., 317 Central Av, Los Angeles, Cal. (i-s)  
Vols. 54-57 (1920-1921)
- Can Entom**—Canadian Entomologist. \$2. Entomological Society of Ontario, Guelph, Ontario (tpi-s)  
Vol. 53 (1921)
- Can Hort**—Canadian Horticulturist. \$1. Horticultural Pub. Co., Ltd., Peterboro, Ontario (Fruit edition indexed) (i-none)  
Vols. 43-44 (1920-1921)
- Can Vet Record**—Canadian Veterinary Record. \$2. Ontario Veterinary College, Toronto, Ontario  
Vol. 2 (1921)
- Coop Manager & F**—Co-operative Manager and Farmer. \$1; single numbers 10c. Manager Publishing Company, Corn Exchange bldg., Minneapolis, Minn.  
Vols. 8-9 (1919-1920)
- Cornell Countryman**—Cornell Countryman. \$1; single numbers 15c. New York State College of Agriculture, Cornell University, Ithaca, N.Y. (i-s)  
Vols. 16-19 (1919-1921)
- Country Gent**—Country Gentleman. \$1; single numbers 5c. Curtis Pub. Co., Independence Square, Philadelphia (tpi-l)  
Vols. 84-86 (1919-1921)
- Country Life**—Country Life. (American) \$5; single numbers 50c. Doubleday, Page & Co., Garden City, N.Y. (i-r)  
Vols. 35-40 (1919-1921)
- Creamery**—Creamery and Milk Plant Monthly. \$1; single numbers 15c. National Milk Pub. Co., 327 S. La Salle St, Chicago (i-none)  
Vols. 8-10 (1919-1921)
- Dairy F**—Dairy Farmer. 50c; single numbers 5c. Fred L. Kimball Co., Waterloo, Ia. (i-r)  
Vols. 17-19 (1919-1921)
- Dakota F**—Dakota Farmer. \$1. The Bushnell Co., Dakota Farmer Bldg., Aberdeen, S.D. (i-s)  
Vols. 39-41 (1919-1921)
- Ecol**—Ecology. \$3; single numbers 75c. Brooklyn Botanic Garden, Brooklyn, N.Y. (i-s)  
Vols. 1-2 (1920-1921)
- Entom News**—Entomological News. \$2.50; single numbers 30c. American Entomological Society, 1900 Race St, Philadelphia (i-s)  
Vol. 32 (1921)
- Exp Sta Record**—Experiment Station Record. \$1; single numbers 15c. U.S. States Relations Service, Washington, D.C.  
Only the longer digests indexed.  
Vols. 40-45 (1919-1921)
- Farmer's Advocate**—Farmer's Advocate and Home Magazine. \$2.50. William Weld Co., Ltd., London, Ontario (i-s)  
Vols. 55-56 (1919-1921)
- Farming**—Farming. \$1; single numbers 10c. W. M. Goodman, editor & publisher, Knoxville, Tenn.  
Vol. 19 (1921)
- Field II**—Field Illustrated and System on the Farm. \$3; single numbers 25c. American International Publishers, Inc., 2 W. 45th St, New York (tpi-none)  
Vols. 29-31 (1919-1921)
- Fig & Olive J**—Fig and Olive Journal. \$1.50. J. J. Hoey, editor & proprietor, 526 Higgins Bldg., Los Angeles, Cal. (i-none)  
Vols. 4-6 (1920-1921)
- Foods & Markets**—Foods and Markets. Division of Foods and Markets, New York State Department of Farms and Markets, Albany, N.Y.  
Publications suspended April, 1921  
Vols. 1-3 (1919-Apr. 1921)
- Gard Chron (Lond)**—Gardeners' Chronicle. \$5.50; single numbers 10c. Gardeners' Chronicle, Ltd., 5 Tavistock St, Covent Garden, London, W.C. 2 (tpi-s)  
Vols. 65-70 (1919-1921)
- Gard Chron Am**—Gardeners' Chronicle of America. \$2; single numbers 25c. Chronicle Press, Inc., 286 5th Av, New York (i-none)  
Vols. 23-25 (1919-1921)
- Gard M**—Garden Magazine. \$3; single numbers 25c. Doubleday, Page & Co., Garden City, N.Y. (tpi-r)  
Vols. 28-34 (1919-1921)
- Gleanings**—Gleanings in Bee culture. \$1; single numbers 10c. A. I. Root Co., Medina, O. (i-s)  
Vols. 47-49 (1919-1921)
- La Hacienda**—La Hacienda. \$3. La Hacienda Co., Sidway Bldg., Buffalo, N.Y. (i-s)  
Vol. 16 (1921)
- Hereditas**—Hereditas. \$4.85. Mendelian Society, Lund, Sweden  
Vol. 2, nos. 1-2 (1921)
- Hoard's D**—Hoard's Dairyman. \$1. W. D. Hoard & Sons Co., Fort Atkinson, Wis. (i-lfn)  
Vols. 56-62 (1919-1921)
- Int R Ag Econ**—International Review of Agricultural Economics. 36 frs; single numbers 5 frs. International Institute of Agriculture, Rome (tpi-none)  
Years 10-12 (1919-1921)
- Int R Sci & Prac Ag**—International Review of the Science and Practice of Agriculture. 36 frs; single numbers 5 frs. International Institute of Agriculture, Rome (tpi-r)  
Years 10-11 (1919-Dec. 1920)
- Int Sugar J**—International Sugar Journal. 21s; single numbers 2s. 2 St Dunstan's Hill, London, E.C. 3 (i-s)  
Vol. 23 (1921)

- J Ag (Quebec)**—Journal of Agriculture and Horticulture. \$1. Department of Agriculture, Province of Quebec, Quebec, Canada (i-s)  
Vols. 22-25 (1919-1921)
- J Ag Cal**—Continued as California Countryman  
Vol. 7 (1921)
- J Ag New Zealand**—Journal of Agriculture of New Zealand. 4s; single numbers 6d. New Zealand Department of Agriculture, Wellington (tpi-l)  
Vols. 18-23 (1919-1921)
- J Ag Pratique**—Journal d'Agriculture Pratique. 48 fr; single numbers 1 fr. 26, Rue Jacob, Paris (i-s)  
Vols. 33-35 (1920-Apr. 2, 1921)
- J Ag Research**—Journal of Agricultural Research. \$3. U.S. Dept. of Agriculture, Division of Publications, Washington, D.C. (tpi-s)  
Publication suspended, December 3, 1921  
Vols. 16-22 (1919-1921)
- J Ag Sci**—Journal of Agricultural Science. \$6; single numbers \$2. Cambridge University Press, Fetter Lane, London, E.C. 4 (tp-s)  
Vols. 9-11 (1919-1921)
- J Bact**—Journal of Bacteriology. \$5. Williams & Wilkins Co., Mount Royal & Guilford Aves, Baltimore (i-s)  
Vols. 4-6 (1919-1921)
- J Bd Ag**—Continued as Journal of the Ministry of Agriculture  
Vols. 25-26 (Nov. 1918-Dec. 1919)
- J Dairy Sci**—Journal of Dairy Science. \$5. Williams & Wilkins Co., Mount Royal & Guilford Aves, Baltimore (i-s)  
Vols. 2-4 (1919-1921)
- J Dept Ag Ireland**—Journal of the Department of Agriculture and Technical Instruction, Ireland. 6d. E. Ponsonby, Ltd., 116 Grafton St, Dublin, Ireland (tpi-s)  
Vols. 17-21 (1919-1921)
- J Dept Ag S Africa**—Journal of the Department of Agriculture of South Africa. 6s; single numbers 6d. Department of Agriculture, Union of South Africa, Pretoria (i-lfn)  
Vols. 2-3 (1921)
- J Dept Ag S Australia**—Journal of the Department of Agriculture of South Australia. 2s 6d. Victoria Square, Adelaide, Australia (i-lfn)  
Vols. 22-25 (1919-1921)
- J Dept Ag Victoria**—Journal of the Department of Agriculture of Victoria. 5s; single numbers 3d. Director of Agriculture, Melbourne, Australia (i-lb)  
Vols. 17-19 (1919-1921)
- J Econ Entom**—Journal of Economic Entomology. \$3.50; single numbers 75c. American Association of Economic Entomologists, Geneva, N.Y. (tpi-s)  
Vols. 12-14 (1919-1921)
- J Farm Econ**—Journal of Farm Economics. \$1.50; single numbers 50c. American Farm Economic Association, 41 North Queen St, Lancaster, Pa. (i-s)  
Vol. 3 (1921)
- J For**—Journal of Forestry. Official Organ of the Society of American Foresters. \$4; single numbers 75c. Society of American Foresters, 930 F St, N.W., Washington, D.C. (tpi-s)  
Vols. 17-19 (1919-1921)
- J For Suisse**—Journal Forestier Suisse. 6.20 frs. Administration Imprimerie Büchler & C<sup>ie</sup>, Berne, Switzerland (i-s)  
Vol. 72 (1921)
- J Heredity**—Journal of Heredity. \$3; single numbers 35c. American Genetic Association, P. O. Box no. 354, Pennsylvania Avenue Station, Washington, D.C. (tpi-s)  
Vols. 10-12 (1919-1921)
- J Home Econ**—Journal of Home Economics. \$2.50; single numbers 30c. American Home Economics Assn., 1211 Cathedral St, Baltimore (tpi-s)  
Vols. 11-13 (1919-1921)
- J Indian Bot**—Journal of Indian Botany. \$4. Methodist Pub. House, Mount Road, Madras, S. India (i-sb)  
Vol. 2, nos. 1-3 (Jan.-May 1921)
- J Int Gard Club**—Journal of the International Garden Club. \$4. N. Taylor, editor, Brooklyn Botanic Garden, Brooklyn, N.Y.  
Elected but not yet indexed.
- J Ministry Ag**—Journal of the Ministry of Agriculture. Single numbers 6d. Great Britain Ministry of Agriculture and Fisheries, 10, Whitehall Place, London, S.W. 1 (i-s)  
Vols. 26-28 (1919-1921)
- J Pomology**—Journal of Pomology. \$3. George Bunyard & Co., Ltd., Royal Nurseries, Maidstone (tpi-s)  
Vol. 2 (1921)
- J Soil Imp**—Journal of Soil Improvement. 25c; single numbers 10c. Wisconsin Soil Improvement Association, Soils bldg., U.W., Madison  
Publication suspended February, 1920  
Vol. 3 (1920)
- Jamaica Ag Soc J**—Journal of the Jamaica Agricultural Society. Single numbers 3d. Jamaica Agricultural Society, 11 North Parade, Kingston, Jamaica (tpi-r)  
Vols. 24-25 (1920-1921)
- Jersey B**—Jersey Bulletin and Dairy World. \$2. Royer H. Brown, editor & publisher, 600 Century Bldg., Indianapolis, Ind. (i-s)  
Vols. 33-40 (1919-1921)
- Kimball's D F**—Continued as Dairy Farmer  
Vol. 17
- Live Stock J**—Live Stock Journal. £1 2s 6d; single numbers 4d. Vinton & Co., Ltd., 8 Bream's Bldgs., Chancery Lane, London, E.C. 4 (i-none)  
Vols. 89-94 (1919-1921)
- Market Growers J**—Market Growers Journal. \$1.50. Market Growers Journal Co., Inter-Southern Bldg., Louisville, Ky. (i-s)  
Vols. 24-29 (1919-1921)
- Market Rep**—Market Reporter. U.S. Department of Agriculture, Bureau of Markets, Washington, D.C.  
Vols. 1-4 (1920-1921)
- Minn Hort**—Minnesota Horticulturist. \$1. Minnesota State Horticultural Society., R. S. Mackintosh, sec., University Farm, St Paul, Minn. (i-s)  
Vols. 47-49 (1919-1921)
- Monthly Crop Rep**—Monthly Crop Reporter. 25c. U.S. Superintendent of Public Documents, Washington, D.C.  
Vols. 5-7 (1919-1921)
- El Mundo Azucarero**—El Mundo Azucarero. \$2. Louisiana Planter and Sugar Manufacturer Co., Lonja del Comercio 415, Habana, Cuba (i-s)  
Vols. 8-9 (1921)
- Mycol**—Mycologia. \$4. New Era Printing Co., 41 N. Queen St, Lancaster, Pa.  
Vols. 11-13 (1919-1921)
- N Y Prod R**—New York Produce Review and American Creamery. \$2. Urner-Barry Co., 173 Chambers St, New York (i-lfn)  
Vols. 47-53 (1919-1921)
- Nat Stock & F**—National Stockman and Farmer. \$1. Stockman-Farmer Pub. Co., Inc., Penn and Shady Aves, Pittsburgh, Pa. (i-s)  
Vols. 42-45 (1919-1921)
- Nat Wool Grower**—National Wool Grower. \$1.50. National Wool Growers' Association Co., Inc., 303 McCormick Bldg., Salt Lake City, Utah (i-none)  
Vols. 9-11 (1919-1921)
- Nor'-West F**—Nor'-West Farmer. \$1.50. Nor'-West Farmer, Ltd., Bannatyne Av., Corner of Dagmar & Ellen Sts, Winnipeg, Canada (i-none)  
Vols. 39-40 (1920-1921)
- O Judd Farmer**—Orange Judd Farmer. \$1; single numbers 5c. Orange Judd Farmer Pub. Co., 523 Plymouth Court, Chicago (i-none)  
Vols. 66-69 (1919-1921)



## LIST OF PERIODICALS INDEXED

- Ohio F**—Ohio Farmer. \$1. Lawrence Pub. Co., 1011-13 Oregon Av, N.E., Cleveland, O. (i-s)  
Vols. 143-148 (1919-1921)
- Pacific Rural Press**—Pacific Rural Press. \$1. 525 Market St, San Francisco (i-s)  
Vols. 99-102 (1920-1921)
- Penn State F**—Pennsylvania State Farmer. \$1; single numbers 15c. Agricultural Society, Pennsylvania State College, State College, Pa. (i-none)  
Vols. 12-15 (1919-Oct. 1921)
- Philippine Ag R**—Philippine Agricultural Review. \$1. Director of Agriculture, Manila, P.I.  
Vols. 12-13 (1919-1920)
- Phyt**—Phytopathology. Official Organ of the American Phytopathological Society. \$5; single numbers 50c. American Phytopathological Society, 8 W. King St, Lancaster, Pa. (tpi-s)  
Vols. 9-11 (1919-1921)
- Potato M**—Potato Magazine. \$1; single numbers 15c. Potato Magazine Co., 619-20 City Hall Square Bldg., Chicago  
Vols. 2-4 (1920-1921)
- Power F**—Power Farming. \$1. Power Farming Press, St Joseph, Mich. (i-none)  
Vols. 28-30 (1919-1921)
- Prac F**—Practical Farmer. 50c Walker Publishing Company, 904 Walnut St, Philadelphia (i-none)  
Publication suspended July, 1921  
Vols. 115-117 (1919-July, 1921)
- Prog F**—Progressive Farmer. Mississippi Valley edition \$1; single numbers 5c. Progressive Farmer Co., 1702 4th Av, Birmingham, Ala. (i-r)  
Vols. 34-36 (1919-1921)
- Purdue Ag**—Purdue Agriculturist. \$1. School of Agriculture, Purdue University, Room 32 Purdue Library, West LaFayette, Ind. (i-none)  
Vols. 13-16 (1919-1921)
- Queensland Ag J**—Queensland Agricultural Journal. 10s. Queensland Department of Agriculture and Stock, Brisbane, Australia (tpi-l)  
Vol. 16, pts. 1-3 (1921)
- R de Ag Cuba**—Revista de Agricultura, Comercio y Trabajo. Negociado de Canje y Publicaciones de la Secretaria de Agricultura, bajos de la Lonja del Comercio, Habana, Cuba  
Vols. 3-4 (1920-May 1921)
- Reliable P J**—Reliable Poultry Journal. \$1; single numbers 10c. Reliable Poultry Journal Pub. Co., Quincy, Ill. (tpi-none)  
Vols. 25-28 (1919-1920)
- Rhodesia Ag J**—Rhodesia Agricultural Journal. 5s. Department of Agriculture, Salisbury, Rhodesia (i-lfn)  
Vol. 18 (1921)
- Royal Hort Soc J**—Journal of the Royal Horticultural Society. 17s 6d. Royal Horticultural Society, Vincent Square, London, S.W. 1 (tpi-none)  
Vols. 43-46 (1919-1921)
- Rural Manhood**—Combined with Association Men, beginning January, 1921  
Vols. 10-11 (1919-1920)
- Rural N Y**—Rural New-Yorker. \$1; single numbers 5c. Rural Pub. Co., 333 W. 30th St, New York (i-r)  
Vols. 78-80 (1919-1921)
- Sci Ag**—Scientific Agriculture. \$2. Canadian Society of Technical Agriculturists, Gardenvale, Quebec  
Vols. 1-2 (1921)
- Scottish J Ag**—Scottish Journal of Agriculture. 5s; single numbers 1s 3d. Board of Agriculture for Scotland, 29 St Andrew Square, Edinburgh, Scotland (i-s)  
Vols. 3-4 (1920-1921)
- Soil Sci**—Soil Science. \$5. Williams & Wilkins Co., Mount Royal & Guilford Avs, Baltimore (tpi-s)  
Vols. 7-12 (1919-1921)
- Successful F**—Successful Farming. 35c; single numbers 5c. Successful Farming Pub. Co., Des Moines, Iowa (i-r)  
Vols. 19-20 (1920-1921)
- Sugar**—Sugar. \$2. Sugar Pub. Corporation, 153 Waverly Place, New York  
Vol. 23 (1921)
- Swine World**—Swine World. \$1; single numbers 10c. James J. Doty Pub. Co., Third & Chestnut Sts, Des Moines, Ia.  
Vols. 6-9 (1919-1921)
- System on the Farm**—Combined with Field Illustrated and continued as Field Illustrated and System on the Farm  
Vols. 4-8 (1919-Jan. 1921)
- Torrey**—Torreya. \$1; single numbers 30c. New Era Printing Co., 41 N. Queen St, Lancaster, Pa. (i-s)  
Vol. 21 (1921)
- Tropical Ag**—Tropical Agriculturist. Rs. 15. Director of Agriculture, Peradeniya, Ceylon (tpi-lb)  
Vols. 56-57 (1921)
- U S Food Surveys**—Food Surveys. United States Department of Agriculture, Bureau of Markets, Washington, D.C.  
Publication suspended June 27, 1919  
Vol. 2
- U S Seed Rep**—United States Seed Reporter. Seed Reporting Service, 59 Board of Trade bldg., Chicago  
Publication suspended October 11, 1919  
Vols. 2-3 (Dec. 2, 1918-Oct. 1919)
- Wallaces' F**—Wallaces' Farmer. \$1. Wallace Pub. Co., 11th & Walnut Sts, Des Moines, Ia. (i-r)  
Vols. 44-46 (1919-1921)
- Weekly N L**—Weekly News Letter. U.S. Dept. of Agriculture, Washington, D.C.  
Discontinued December 7, 1921  
Vols. 6-9 (1919-1921)
- West Indian B**—West Indian Bulletin. 6d. Advocate Co. Ltd., Broad St, Bridgetown, Barbados (i-r)  
Vol. 18 (1921)
- World Ag**—World Agriculture. \$3. World Agriculture Corporation Publication Committee, Amherst, Mass. (i-r)  
Vols. 1-2 (1921)

Additional Periodical References on Agricultural Subjects are taken from the following sources: Industrial Arts Index, Public Affairs Information Service, Readers' Guide to Periodical Literature.

## List of Experiment Station Literature

Perhaps a word of explanation is necessary regarding the date used in our entries taken from annual reports. The year for most agricultural departments, etc., begins and ends in the middle of the year. For instance, the experiment stations year is from June, 1919, to June, 1920. In that and like cases we have entered the reports with the later date. In the same way, biennial reports, for the years 1919-1920, are entered with the date for the last year.

It has been suggested that it would be a convenience to the librarian to know which experiment bulletins have been indexed. This information has been added in the list below.

**Ala Ag Exp**—Alabama Agricultural Experiment Station. Publications. Auburn, Ala.  
Bulletins 203, 205-216  
Circulars 39-44  
Press Bulletins 102-103, 105  
Reports 1918-1920

**Alaska Ag Exp**—Alaska Agricultural Experiment Station. Publications. U. S. Dept. of Agriculture, Division of publications, Washington, D.C.  
Reports 1917-1919

**Ariz Ag Exp**—Arizona Agricultural Experiment Station. Publications. Tucson, Ariz.  
Bulletins 84-93  
Circulars 33-41  
Reports 1918-1920

**Ark Ag Exp**—Arkansas Agricultural Experiment Station. Publications. Fayetteville, Ark.  
Bulletins 145, 149-150, 152, 154-159, 161-174  
Circulars 45-49  
Technical Bulletin 175

**Cal Ag Exp**—University of California, College of Agriculture. Agricultural Experiment Station. Publications. Berkeley, Cal.  
Bulletins 301-330, 333  
Circulars 199, 204, 206-211, 213-226  
Reports 1918-1920

### *Miscellaneous*

Plan for reclaiming and peopling the mesa lands bordering the Imperial irrigation district

**Canebrake Ag Exp**—Canebrake Agricultural Experiment Station. Publications. Uniontown, Ala.  
Bulletin 29  
Report 1918

**Colo Ag Exp**—Colorado Agricultural Experiment Station. Publications. Fort Collins, Colo.  
Bulletins 247-262, 264-266  
Reports 1918-1920  
Seed Lab. Bulletins v. 1, nos. 3-4; v. 2, no. 2

**Conn State Ag Exp**—Connecticut Agricultural Experiment Station. Publications. New Haven, Conn.  
Bulletins 207-231  
Immediate Information Bulletins 8-13, 15  
Report 1918

**Conn Storrs Ag Exp**—Storrs Agricultural Experiment Station. Publications. Storrs, Conn.  
Bulletins 96-106  
Report 1917

**Cornell Ag Exp**—Cornell University. Agricultural Experiment Station of the N. Y. State College of Agriculture. Publications. Ithaca, Bulletins 396-404  
Memoirs 15-18, 20-39  
Reports 1919, v. 1-2, 1920

**Del Ag Exp**—Delaware College. Agricultural Experiment Station. Publications. Newark, Del.  
Bulletins 120-127

**Fla Ag Exp**—University of Florida. Agricultural Experiment Station. Publications. Gainesville, Fla.  
Bulletins 152-160  
Report 1918

**Ga Ag Exp**—Georgia Agricultural Experiment Station. Publications. Experiment, Ga.  
Bulletins 126-138  
Reports 1917-1920

**Guam Ag Exp**—Guam Agricultural Experiment Station. Publications. U.S. Dept. of Agriculture, Division of publications, Washington, D.C.  
Circular 1  
Reports 1917-1919

**Hawaii Ag Exp**—Hawaii Agricultural Experiment Station. Publications. U.S. Dept. of Agriculture, Division of publications, Washington, D.C.  
Bulletin 45  
Press Bulletin 54  
Reports 1918-1919

**Ia Ag Exp**—Iowa State College of Agriculture and Mechanic Arts. Agricultural Experiment Station. Publications. Ames, Ia.  
Bulletins 179, 181-197  
Circulars 54-58, 60-68  
Reports 1917-1919  
Research Bulletins 45, 47-65  
Soil Survey Reports 2-18

### *Miscellaneous*

Complete list of publications; including bulletins, circulars, press bulletins, research bulletins and soil survey bulletins

**Idaho Ag Exp**—University of Idaho. Agricultural Experiment Station. Publications. Moscow, Idaho  
Bulletins 109, 112-113, 115-116, 118-125  
Circulars 7-12, 14-19

### *Miscellaneous*

Biennial report, State seed comr., 1917-1918

**Ill Ag Exp**—University of Illinois. Agricultural Experiment Station. Publications. Urbana, Ill.

Abstract Bulletins 225, 230  
Bulletins 212-218, 220-233  
Circulars 233-246  
Reports 1917-1920  
Soil Report 18

**Ind Ag Exp**—Purdue University. Indiana Agricultural Experiment Station. Publications. La Fayette, Ind.  
Bulletins 215-227, 229-253; Popular Editions 240, 249  
Circulars 84-92, 94, 96-102; Revised Editions 36, 95  
Reports 1919-1920

**Kan Ag Exp**—Kansas State Agricultural College. Agricultural Experiment Station. Publications. Manhattan, Kans.  
Bulletins 221-224, 226  
Circulars 70-91  
Fort Hays Circular 6  
Inspection Circulars 8-12  
Reports 1917-1920  
Technical Bulletins 6-8

### *Miscellaneous*

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- Bulletins v. 1 (Gen. B. 311, 315, 317-319) My. Ag, O-D '18; v. 2 (Gen. B. 320-323, 325-328) Ja-My, Ag '19; v. 3 (Gen. B. 332, 335-336, 338-343, 347-350) Ja, Mr-Jl '20; v. 4 (Gen. B. 352, 353, 355) Ja-F, Ap '21
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- Crop and Livestock Reports 42-44, 47-48, 50-56, 58-65
- Dairy Bulletins v. 16, nos. 9-12; v. 17, nos. 1-4
- Food Bulletins v. 17, nos. 5-12; v. 18, nos. 1-12
- Punjab Ag Dept—Punjab Department of Agriculture.** Publications. Lahore, India
- Report 1917
- Quebec Ag Dept—Province of Quebec Department of Agriculture.** Publications. Quebec, Canada.
- Bulletins 25, 35, 42-45, 47, 49-62, 64, 66
- Circulars 3, 13, 22, 25, 28-32, 35-38

*Miscellaneous*

- Competition of agricultural merit, 1918
- Competition of agricultural merit, 1920
- 36th annual report of the Dairymen's association and of the dairy school, 1917

- 37th annual report of the Dairymen's association and of the dairy school, 1918
- 38th annual report of the Dairymen's association and of the dairy school, 1919
- Report of the Minister of agriculture, 1918
- Report of the Minister of agriculture, 1919
- Report of the Minister of agriculture, 1920
- Annual report of the Pomological and fruit growing society, 1917
- Annual report of the Pomological and fruit growing society, 1918
- Annual report of the Pomological and fruit growing society, 1919
- Annual report of the Pomological and fruit growing society, 1920
- 10th annual report of the Quebec society for the protection of plants from insects and fungous diseases, 1917-1918
- 11th annual report of the Quebec society for the protection of plants from insects and fungous diseases, 1918-1919
- 12th annual report of the Quebec society for the protection of plants from insects and fungous diseases, 1919-1920

- R I Ag Bd—Rhode Island State Board of Agriculture.** Publications. Providence, R.I.
- Bulletin 1
- Report 1919

- S Africa Ag Dept—Union of South Africa Department of Agriculture.** Publications. Pretoria, Union of South Africa
- Bulletins 1, 4, 6
- Local Series 83, 87
- Reports 1917, 1919-1920
- Reprints 1, 6, 39
- Science Bulletins 12, 15-19, 21

*Miscellaneous*

Report on cold storage conditions for export fruit at Cape Town

- S Australia Ag Dept—South Australia Department of Agriculture.** Publications. Adelaide, South Australia
- Bulletin 130
- Report 1917

- S C Ag Dept—South Carolina Department of Agriculture, Commerce and Industries.** Publications. Columbia, S.C.
- Bulletin 63
- Report 1918
- Yearbook 1919

- S D Ag Bd—South Dakota State Board of Agriculture.** Publications. Huron, S.D.
- Reports 1918-1919

- Saskatchewan Ag Dept—Saskatchewan Department of Agriculture.** Publications. Regina, Saskatchewan
- Animal Husbandry Circular 4
- Bulletins 41 (3d ed.), 42 (2d ed.), 47-48, 51, 55, 59-60, 63-64; Revised Bulletin 58
- Circular 1
- Domestic Science Circulars 5-7
- Field Husbandry Circulars 2, 4, 6-8, 14, 19-21, 24, 26-28, 30-32
- Reports 1917-1919

*Miscellaneous*

- Alfalfa seed production
- Blackleg; its nature and cause and prevention
- Breeding, feeding and management of swine
- Care, feeding and management of beef cattle
- Farm forestry
- Farm forestry and horticulture
- Farm machinery
- 4th annual report of the Cooperative organization branch, 1917-18. W. W. Thomson
- Grading of cream
- Hog cholera: its cause, symptoms, treatment and prevention
- Horse breeding in Saskatchewan
- Rules to observe and precautions to take in growing profitable crops on the drier lands of Saskatchewan

- Scotland Ag Bd—Scotland Board of Agriculture.** Publications. 29 St Andrew sq, Edinburgh, Scotland
- Leaflets 1-2, 9, 11, 20, 26, 34, 41-49
- Monthly Reports D '19, Mr-D '20, F '21
- Reports 1916-1918

**Scotland Ag Bd—Continued***Miscellaneous*

- Abstract of agricultural returns for Scotland, 1919  
 Agricultural returns for Scotland, 1920  
 Agricultural returns for Scotland, 1921; memorandum  
 Agricultural Statistics 1918:v. 7, pt. 2  
 Agricultural Statistics 1919:v. 8, pt. 3  
 Agricultural Statistics 1920:v. 9, pt. 1, Acreage and livestock returns of Scotland with a summary for the United Kingdom  
 Agricultural Statistics 1920: v. 9, pt. 2, Returns of produce of crops in Scotland with a summary for the United Kingdom  
 Report of the Board of agriculture for Scotland on farm workers in Scotland in 1919-20  
 Report of the Committee on women in agriculture in Scotland  
 Report on agricultural conditions for the year 1919  
 Report on agricultural conditions for the year 1920  
 Report on agricultural credit organisation in France with suggestions for a Scotland scheme of agricultural credit

**Tenn Ag Dept—Tennessee State Department of Agriculture.** Publications. Jackson, Tenn. Report 1918

**Tex Ag Dept—Texas Department of Agriculture.** Publications. Austin, Texas  
 Bulletins 61, 64-66

*Miscellaneous*

- Pink bollworm act of Texas. (House bill no. 157)  
 Standardization affecting fruit and vegetable shipments for market

**Trinidad and Tobago Ag Dept—Trinidad and Tobago Department of Agriculture.** Publications. Port-of-Spain, Trinidad  
 Reports 1917-1918

**U S Ag—United States Department of Agriculture.** Publications. Division of Publications, Washington, D.C.

- (A copy of any of the publications listed except those otherwise noted, may be obtained free as long as the Department's supply lasts. After this Department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. Send all remittances to the Superintendent of Documents direct. In cases where the free copies are exhausted at the time of entering publication, the price will be given)

- B. S. Document 110  
 Bulletins 391, 613, 617, 676, 706, 711, 718, 720, 724, 726-728, 730, 737-812, 814-836, 838-848, 850-855, 857-867, 869-871, 873-874, 876-877, 880-890, 892, 894-895, 897, 902-903, 907, 909, 911, 913-914, 916-918, 921-922, 925-927, 932-943, 945-956, 958-970, 972, 974, 977, 979, 987, 989, 990-991, 993, 995-996, 999

- B. P. I. Inventories 45-47  
 B. P. I. Inventory of Seeds and Plants no. 48

- C. P. & B. I. Circular 5  
 C. T., & F. C. D. Circulars 6-7  
 Dept. Circulars 1-3, 5-6, 8-9, 13-20, 23, 25, 27-85, 87-90, 92-99, 101-102, 104-105, 107-112, 114, 125, 127, 129, 131-137, 139, 141, 143, 145-146, 148-149, 152, 154, 158-159, 162, 164-165, 167, 169-182, 185-186, 189, 191, 193-194, 196

- D. L. A.—4-6  
 H. & P. Circular 1  
 H. Document 1590  
 Index to Dept. Bulletins 376-500 (7pts.)  
 Index to Farmers' Bulletins 1-1000  
 Sec. Circulars 124-155, 183; 1st Revision 70  
 Separates 763-791, 793-798, 801-809, 811-818, 820, 822-823, 825-830, 944  
 S. R. A.—B. A. I. 138, 140, 142, 144-145, 150-151, 153, 156, 161  
 S. R. A.—B. A. I. Index 1918  
 S. R. A.—B. S. 25, 27-30, 40-41  
 S. R. A.—Chem. Sup. 55-60, 66

- S. R. A.—Fed. Hort. Bd. 57-59, 61, 63-66  
 S. R. A.—Fed. Hort. Bd. Index 1919  
 S. R. A.—Insecticides 23-26, 35  
 S. R. A.—Markets 40-47, 49-55, 57, 59, 62-64, 66, 68  
 Soils Report 1915  
 U.S. Grain Standards Act 90  
 W. I. A. Circulars 24-27  
 Yearbooks 1919-1920

*Miscellaneous*

- Address of D. F. Houston before the American national live stock assn., Denver, Colo., Jan. 22, 1919  
 Annual reports for the year ended Je 30, 1918  
 Annual reports for the year ended Je 30, 1919  
 Better sires—better stock  
 Business of agriculture  
 Cooperative extension work in agriculture and home economics, 1917:pt 2 of report on experiment stations and extension work in United States  
 Cooperative extension work in agriculture and home economics, 1918  
 Cooperative extension work in agriculture and home economics, 1919  
 Directory of American agricultural organizations, 1920  
 Field operations of the Bureau of soils, 1916  
 Need of strong Department of agriculture in the states  
 Publications available for distribution. (rev. to Jl 1 '18)  
 Remarks of D. F. Houston at conference of editors of agricultural journals  
 Report of agricultural commission to Europe: observations made by American agriculturists in Great Britain, France, and Italy, for the United States Department of agriculture  
 Report of the Bureau of soils, 1914  
 Reports 1918-1920: Chemist; Entomologist; Forester; Librarian; Secretary; Solicitor; Bur. of animal industry; Bur. of biological survey; Bur. of crop estimates; Bur. of markets; Bur. of plant industry; Bur. of public roads; Bur. of soils; Director of states relation service; Div. of accounts and disbursements; Div. of publications; Div. of the states relations service; Federal horticultural board; Insecticide and fungicide board; Office of farm management and farm economics; Publications; Weather bureau  
 Today and tomorrow in American agriculture  
 United States Department of agriculture; what it is and how it serves  
 Use book: a manual of information about the national forests; grazing section, 1921  
 Vacation days in Colorado national forests  
 Work and expenditures of the agricultural experiment station, 1917. (pt. 1)  
 Work and expenditures of the agricultural experiment station, 1918

**U S Ag Farmers' B.**—See Farmers' B.

**Va Ag Dept—Virginia Department of Agriculture & Immigration.** Publications. Richmond, Va.

- Bulletins 135-136, 138-155, 159-162, 164-167  
 Reprint Bulletin 39

*Miscellaneous*

Virginia Department of agriculture and immigration hand book, 7th edition, 1919

**Vt Ag Dept—Vermont Department of Agriculture.** Publications. St. Albans, Vt.  
 Report 1920

**W Va Ag Dept—West Virginia Department of Agriculture.** Publications. Charleston, W. Va.  
 Bulletins 39-40, 42, 48-50  
 Reports 1918-1920

**Wash Ag Dept—Washington State Department of Agriculture.** Publications. Olympia, Wash.  
 Report 1918

**Wis Ag Dept—Wisconsin Department of Agriculture.** Publications. Madison, Wis.  
 Bulletins 16-18, 20-28, 30, 32, 36, 38-40





## List of Selected Extension Publications

The valuable extension bulletins of all the agricultural colleges are indexed as received. Bulletin numbers are given for the publications indexed.

**Ala Ag Ext**—Alabama Polytechnic Institute Extension Service. Publications. Auburn, Ala. Circulars 25, 27-29, 31, 33-35, 38-41, 43-47 Farmers' Leaflet 23

**Ariz Ag Ext**—University of Arizona. College of Agriculture. Extension Service. Publications. Tucson, Ariz. Circulars 21, 23, 25-30 Reports 1918-1920

### *Miscellaneous*

Program of the 9th annual farm and home week, Tucson, Arizona, Jan. 17-22, 1921

**Ark Ag Ext**—University of Arkansas. Extension Division. Publications. Fayetteville, Ark. Bulletin 3 Circulars 52, 63-64, 69, 76, 81-82, 84-87, 89, 98-100

### *Miscellaneous*

Manual on boys' and girls' agricultural club work

**Clemson College Ext.** See **S C Ag Ext**

**Colo Ag Ext**—Colorado Agricultural College. Extension Service. Publications. Fort Collins, Colo. Bulletins 144, 146-149, 150A-165A, 170A-180A, 182A-187A Reports 1918, 1920

**Conn Ag Coll Ext**—Connecticut Agricultural College. Extension Service. Publications. Storrs, Conn. Bulletins 12-33, 35-42

### *Miscellaneous*

Shall I be a farmer?

**Cornell Ag Ext**—N.Y. State College of Agriculture at Cornell University. Extension Service. Publications. Ithaca, N.Y. Bulletins 20, 30-38, 40-41, 43-46 Farm Bur. Circular 10 Junior Bulletins 1-2, 4-6, 9

**Cornell Reading Course**—Cornell University, N. Y. State College of Agriculture. Cornell Reading Course for the Farm. Ithaca, N.Y. Reading Course Farm 133-153, 155-157, 159; Revised Reading Course Farm 117 Reading Course Home 108, 120-129, 131-136, 138-139

**Del Ag Ext**—Delaware College. Division of Agricultural Extension. Publications. Newark, Del. Bulletins 4, 6 Circular 9

**Fla Ag Ext**—University of Florida. Agricultural Extension Division. Publications. Gainesville, Fla. Bulletins 13-16, 20, 22-29 Circulars 6-13 Report 1920

**Fla State College for Women.** Publications. Tallahassee, Fla. Bulletins 1, 19, 25, 27-29, 32-34

**Ga Ag Coll (Ext)**—Georgia State College of Agriculture. Extension Division. Publications. Athens, Ga. Bulletins 154, 156, 161-162, 164-166, 168-171, 173, 175-176, 180, 184, 186-187, 191-194, 196-197, 199, 201, 210-211, 215-216, 220-223, 225-226, 229-230, 232, 234, 237-240; Reprint Bulletins 195, 212; Revised Bulletin 219 Circulars 61, 80, 82-84, 86; Reprint Circulars 29, 60

### *Miscellaneous*

Tenative post-war farm program for Georgia Terracing

**Hampton Leaflets**—Hampton Normal and Agricultural Institute. Hampton Leaflets, Hampton, Va. Leaflets 103, 105-106

**Ia Ag Ext**—Iowa State College of Agriculture and Mechanic Arts. Extension Department. Publications. Ames, Ia. Bulletins 33 (3d rev.), 61, 66-70, 72-75, 80-81; Reprint Bulletins 60, 71 Emergency Leaflets 49-54; Reprint Leaflet 53 Home Economics Bulletins 10-11 Home Economics Circulars 17-24; Revised Circular 18 Junior Circulars 49, 51 Report 1919 Short Course Notes 6 (reprint)

**Idaho Ag Ext**—University of Idaho. Extension Division. Publications. Boise, Idaho Bulletins 6, 22-23, 25-41, 45-50, 52 Circulars 19, 21-23 Review no. 8

**Ill Ag Ext**—University of Illinois. College of Agriculture. Extension Service in Agriculture and Home Economics. Publications. Urbana, Ill. Circulars 26-35, 37-43

### *Miscellaneous*

Food calendar Illinois state fair, Springfield, Aug. 20-28, 1919

Relation of the farm bureau and the farm adviser to cooperative and commercial activities

**Kan Ag Ext**—Kansas State Agricultural College. Division of College Extension. Publications. Manhattan, Kansas Bulletin 19 Circulars 12-21, 23 X Forms 156, 161-163, 167-168, 171, 174

**Ky Ag Ext**—University of Kentucky. College of Agriculture. Extension Division. Publications. Lexington, Ky. Circulars 56, 62, 66-80, 82-105

**La Ag Ext**—Louisiana State University and Agricultural and Mechanical College. Extension Division. Publications. Baton Rouge, La. Circulars 27-47

**Maine Ag Ext**—Maine University. College of Agriculture. Agricultural Extension Service. Publications. Orono, Me. Bulletins 114, 118-119, 121-123, 126-129, 131-132; Revised Bulletins 112, 116, 119, 130 Circulars 44, 63, 65 (no. 45, rev.), 66-67

**Mass Ag Ext**—Massachusetts Agricultural College. Extension Service. Publications. Amherst, Mass. Boys' and Girls' Series 11, 13 Bulletins 27, 29-36 Circulars 55, 76, 80-82; Revised Circular 7 Junior Series 2-5, 9, 11 Leaflets 1-14, 16, 19-22, 24-26, 28, 30-32, 39 Library Leaflets 36; Revised Leaflet 35 Report 1917-1919

**Md Ag Ext**—Maryland State College of Agriculture. Extension Service. Publications. College Park, Md. Bulletins 14-16, 18, 21-23; Revised Bulletin 2 Circular Letters 39, 48 Circulars 38, 47 Report 1918-1919

**Mich Ag Ext**—Michigan Agricultural College. Extension Division. Publications. East Lansing, Mich. Bulletins 18, 20-21; Reprint Bulletin 7; Revised Bulletins 1, 4, 13, 17 Club Bulletin 12; Revised Bulletin 12 Course Notes nos. 17-24



**Minn Ag Ext**—University of Minnesota. College of Agriculture. Extension Division. Publications. St Paul, Minn.

Bulletins 15, 50  
Circulars 1-6  
Minn. Farmers' Lib. Ext. Bulletin 65; Revised Bulletins 10, 47  
Special Bulletins 28, 30-49; Reprint Bulletins 29, 39; Reprint & Revised Bulletins 28, 37

**Miss Ag Ext**—Mississippi Agricultural and Mechanical College. Agricultural Extension Department. Publications. Agricultural College, Miss.

Bulletins 5, 10-15  
Circulars 21-29  
Food Bulletin 1  
Food Preservation Series 3  
Food Series 25-26  
Household Art Series 1  
Poultry Series 4  
Report 1918

#### Miscellaneous

Program for Mississippi home demonstration clubs for women, containing constitution and by-laws and references to available bulletins

**Mo Ag Ext**—University of Missouri. College of Agriculture. Agricultural Extension Service. Publications. Columbia, Mo.

Circulars 13, 53, 56-58, 60-68, 70-74, 77-97, 99-100  
Leaflets v. 3, nos. 9-10  
Project Announcements 12-13

**Mont Ag Ext**—Montana State College of Agriculture and Mechanic Arts. Extension Service. Publications. Bozeman, Mont.

Bulletins 44-46  
Publications Nos. 28-31

**N C Ag Ext**—North Carolina College of Agriculture and Mechanic Arts. Agricultural Extension Service. Publications. West Raleigh, N.C.

Circulars 79, 81-96, 98, 100-110, 112-115  
Farmers' Market Bulletin v. 7, no. 38  
Reports 1918-1920

**N D Ag Ext**—North Dakota Agricultural College. Agricultural Extension Department. Publications. Agricultural College, N.D.

Circulars 16-32, 34-44

**N H Ag Ext**—New Hampshire College of Agriculture and the Mechanics Arts. Extension Service. Publications. Durham, N.H.

Bulletins 9-15  
Circulars 23-25, 42-46  
Press Bulletin 128

**N J Ag Ext**—New Jersey State Agricultural College. Division of Extension. Publications. New Brunswick, N.J.

Bulletin v. 1, no. 19  
Bulletins 20-25  
Circulars 10, 12-13

**N M Ag Ext**—New Mexico College of Agriculture and Mechanic Arts. Extension Service. Publications. State College, N.M.

Circulars 44-45, 47-51, 54-60, 63-68  
Farm Courier v. 8, nos. 3-4, 6-9  
Report 1919-1920

**Neb Ag Ext**—University of Nebraska. College of Agriculture. Extension Service. Publications. Lincoln, Neb.

Bulletins 51-54, 57-60, 62-63  
Department Circular 35  
Emergency Bulletins 29, 35  
Entomological Circular 1  
Horticulture Circular 21  
Special Circular 1

**Nev Ag Ext**—University of Nevada. College of Agriculture. Extension Division. Publications. Reno, Nev.

Bulletins 19-28  
Leaflet 18

**Ohio Ag Ext**—Ohio State University. Agricultural College. Extension Service. Publications. Columbus, O.

Bulletins v. 14, nos. 2, 4-5, 8-10; v. 15, nos. 1-9, 11-13, 15, 17-20; v. 16, nos. 1-3, 5-6, 9-10; v. 17, no. 2

Circulars v. 4, nos. 8-9, 13, 18-19, 50; v. 5, nos. 1, 6, 8-9, 12, 14, 47-48, 54-55, 58; v. 6, nos. 1, 4-5, 7-13, 17, 19-21, 36

Timely Soil Topics 7-8, 23-24, 26-42

#### Miscellaneous

Plans and recreation  
Plans for organization and suggestions for conducting club work  
Suggestions to local club leaders for the training of canning teams

**Okla Ag Ext**—Oklahoma Agricultural and Mechanical College. Extension Division. Publications. Stillwater, Okla.

Bulletin v. 16, no. 8  
Circulars 81, 83-84, 86-91, 93-103, 105-117, 119, 121; Revised Circulars 85, 104

#### Miscellaneous

Salads

**Ore Ag Ext**—Oregon Agricultural College Extension Service. Publications. Corvallis, Ore.

Bulletins 224-225, 228 (Not to be confused with Bulletins with the same numbers but different titles published in 1917); 282-284, 298, 301, 303, 305-327, 333  
Reports 1918-1920

#### Miscellaneous

Food value of dairy products  
Thrift education in Oregon

**Pa Ag Ext**—Pennsylvania State College. School of Agriculture. Department of Agricultural Extension. Publications. State College, Centre County, Pa.

Circulars 74, 78-84, 86

#### Miscellaneous

Homemade fireless cooker

**Purdue Ag Ext**—Purdue University. Department of Agricultural Extension. Publications. LaFayette, Ind.

Bulletins 66, 71, 73-94, 96-97, 99-100; Revised Bulletins 52, 65, 80, 93, 99  
Leaflets 46, 104-121; Revised Bulletins 99, 102, 104  
Reports 1918-1919

#### Miscellaneous

Hints for poultry raisers  
Pure bred bull proves his worth

**R I Ag Ext**—Rhode Island State College. Extension Department. Publications. Kingston, R. I.

Bulletins 7-8; Revised Bulletin 9  
New Series Bulletin 6

**S C Ag Ext**—Clemson Agricultural College. Extension Division. Publications. Clemson College, S.C.

Bulletins 16 (5th ed.), 40 (2d ed.), 41-45, 47  
Circulars 10, 12, 14-28  
Report 1920

**S D Ag Ext**—South Dakota State College of Agriculture and Mechanic Arts. Extension Division. Publications. Brookings, S.D.

Circulars 10, 12, 17, 26-35, 37  
Junior Circular 26

**Tenn Ag Ext**—Tennessee University. College of Agriculture. Division of Extension. Publications. Knoxville, Tenn.

Forms 37, 70  
Publications 71-72, 74-90, 92-97; Revised Bulletins 24, 30 (2d ed.), 31 (2d ed.), 32

**Tex Ag Ext**—Texas Agricultural and Mechanical College. Extension Service. Publications. College Station, Texas

Bulletins B48, B50-B53, B55-B56, B59  
Bulletins C7-C13  
Reports 1919-1920

**Utah Ag Ext**—Utah Agricultural College. Extension Division. Publications. Logan, Utah

Circulars v. 6, nos. 24-29; v. 7, nos. 3-10

**Va Ag Ext**—Virginia Agricultural and Mechanical College and Polytechnic Institute. Division of Extension Work. Publications. Blacksburg, Va.

Bulletins 30-41, 45-55, 59-60, 62-65; Revised Bulletins 56-58  
Report 1919

**Vt Ag Ext**—University of Vermont. College of Agriculture. Extension Service. Publications. Burlington, Vt.

Circulars 15-19

**W Va Ag Ext**—West Virginia University. College of Agriculture. Extension Department. Publications. Morgantown. W.Va.  
Circulars 210, 214, 217-218, 220, 235-237, 240, 246, 250-251

**Wash Ag Ext**—State College of Washington. Department of Extension. Publications. Pullman. Wash.

Bulletins 66-67, 69; Reprint Bulletin 5  
Circulars 9-10  
Communications to County Agents v. 2, no. 7  
Entom. Circulars 13, 15, 18, 24  
Home Economics Circular 26  
Series 1, nos. 41, 44, 47, 49-59, 61, 63-65

*Miscellaneous*

Digest of extension service activities and farm bureau projects, January-July, 1921. (v. 1, nos. 9-12; v. 2, nos. 1-2)  
Summary of annual report of the Director, 1918

**Winthrop Normal Coll**—Winthrop Normal and Industrial College. Publications. Rock Hill, S.C.  
Series 3, nos. 6-12; 4, no. 1

**Wis Ag Ext**—University of Wisconsin. College of Agriculture. Extension Service. Publications. Madison, Wis.  
Circulars 107-108, 110-122, 124-127, 129-134, 136; Reprint Bulletins 58, 96; Revised Bulletins 52, 57

*Miscellaneous*

Grow more feed. (Spec. C.)  
Hay for emergencies. (Spec. C.)  
Housewife keeps score. (Spec. C.)  
Make a paper dress form. (Spec. C.)  
Milk, creamy, appetizing, wholesome. (Spec. C.)  
Milk helps your children to keep well and happy. (Spec. C. rev.)  
Wisconsin a source of dairy cattle. (Spec. C.)

**Wyo Ag Ext**—University of Wyoming. College of Agriculture. Extension Division. Publications. Laramie, Wyo.  
Boys' & Girls' Ext. Work v. 5, nos. 1-8  
Circulars 1, 3-5  
Farm Bulletins v. 9, no. 1; v. 10, no. 1



## Key to Abbreviations

|                       |                        |                      |                          |
|-----------------------|------------------------|----------------------|--------------------------|
| abr. abridged         | cond. condensed        | Inst. Institute, In- | no. number               |
| Ag. Agricultural      | conf. conference       | stitution            | O. October               |
| Ag. August            | cont. continued        | Int. International   | p. pages                 |
| Ap. April             | D. December            | J. Journal           | pamph. pamphlet          |
| B. Bulletin           | div. division          | Ja. January          | por. portrait            |
| Bd. Board             | econ. economic         | Je. June             | Pro. proceedings         |
| bibliog. bibliography | ed. editor             | Jl. July             | Pub. publications        |
| bldg. building        | Educ. education        | lib. library         | Rep. report              |
| Bot. Botanical        | eng. engineering,      | mim. mimeographed    | Sci. science, scientific |
| Bur. bureau           | engineers              | misc. miscellaneous  | S. September             |
| C. Circular           | Exp. Experiment sta-   | Mr. March            | Ser. Series              |
| c. cents              | tion, Experimental     | My. May              | Soc. Society             |
| chm. chairman         | ext. extension         | Nat. National        | spec. special            |
| com. committee        | F. February            | N. November          | sup. supplement          |
| comp. compiled, com-  | gen. general           | n.d. no date         | Univ. University         |
| piler                 | hdbk. handbook         | n.p. no paging       | v. volume                |
| comr. commissioner    | il. illustrated, -ion, |                      | yr. year                 |
|                       | -ions                  |                      | Trans. Transactions      |

A colon after an initial designates the most usual given names, as A: Augustus; B: Benjamin; C: Charles; D: David; E: Edward; F: Frederick; G: George; H: Henry; I: Isaac; J: John; L: Louis; N: Nicholas; P: Peter; R: Richard; S: Samuel; T: Thomas; V: Victor; W: William.

- \* References to Occasional material are marked with an asterisk when entered for the first time

## Abbreviations of Publishers' Names Used in Book Reviews

|  |   |
|--|---|
| Appleton. D. Appleton & Co., 29-35 W. 32d st, N.Y.                                   | Lockwood Press. Lockwood Press, 1 Mitre Court, E. C. 4 London, England        |
| Atlantic Monthly Press, inc., 41 Mt. Vernon st, Boston                               | Longmans. Longmans, Green & Co., 55 5th av, Cor 12th st, N.Y.                 |
| Blakiston. P. Blakiston's Son & Co., 1012 Walnut st, Philadelphia                    | McClurg. A. C. McClurg & Co., 330-352 E. Ohio st, Chicago                     |
| Carnegie Institute of Washington, Washington, D.C.                                   | McGraw. McGraw-Hill Book Co., 370 7th av, N.Y.                                |
| Doubleday. Doubleday, Page & Co., Garden City, N.Y.                                  | Macmillan. The Macmillan Co., 66 5th av, N.Y.                                 |
| Dutton. E. P. Dutton & Co., 681 5th av, N.Y.   | Manual Arts Press, 237 N. Monroe st, Peoria, Ill.                             |
| Frederick C. Matthews Co., 63 Mullett st, Detroit, Mich.                             | Oxford. Oxford University Press (American Branch), 35 W. 32d st, N.Y.         |
| Harcourt. Harcourt, Brace & Howe, 1 W. 47th st, N.Y.                                 | Saunders. W. B. Saunders Co., West Washington sq, Philadelphia                |
| Harper. Harper & Brothers, Franklin sq, N.Y.   | Stewart & Kidd Co., Cincinnati, Ohio  |
| Harvard Univ. Press, 29 Randall Hall, Cambridge, Mass.; 19 E. 47th st, New York City | Wiley. John Wiley & Sons, 432 4th av, N.Y.                                    |
| Lippincott. J. B. Lippincott Co., East Washington sq, Philadelphia                   | Williams & Wilkins. Williams & Wilkins Co., 2419-21 York Road, Baltimore, Md. |

# Checklist of Occasional Literature

1919—1921

- Ajmere-Merwara commissioner and conservator of forests, Ajmere, British India**  
Annual report on the Forest administration in Ajmere-Merwara for the year 1917-1918
- Alabama Bankers' association, Montgomery**  
Proceedings, 1918. p 56-81 Address on federal land banks. T. Goodwyn; p 80-3 Report of the agricultural committee
- Alabama Commissioner of conservation, Montgomery**  
Game and fish laws of Alabama in force Nov. 1, 1919
- Alabama Department of game and fish, Montgomery**  
Alabama bird day book, Mar. 26, 1920  
Bird day book, 1919  
6th biennial report, Oct. 1, 1916-Sept. 30, 1918
- Alabama State highway commission, Montgomery**  
Good roads days, August 14 & 15. (B. 13)  
7th annual report, from April 1st, 1917-April 1st, 1918. (B. 15)
- Alaska Bureau of publicity, Juneau**  
Edible herbs and vegetable found in Alaska. (B. 9)
- Alberta Superintendent of fairs and institutes, Edmonton**  
Little talk about the baby. H. MacMurchy
- Alberta Women's institute, Department of agriculture, Edmonton**  
Home canning of fruits, vegetables, meats. B. C. McDermand  
Suggestions for the health of children
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I H C bulletins for farmers, bankers, merchants, their wives and children  
Making things; the four year rotation plan for vitalizing agriculture in the rural schools. P. G. Holden and C. M. Carroll. (Pt. 2)  
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- Inter-state commission of Australia, Melbourne**  
Prices investigation, no. 2 report; meat. (6d)  
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- Investment bankers association of American reclamation securities committee, 111 W. Monroe st, Chicago**  
Synopsis of drainage laws: a handbook
- Iowa, University of, Iowa City**  
Animal ecology of Johnson county. D. M. Brumfiel. (Studies in natural history. v. 8, no. 1)  
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Nest study of the Maryland yellowthroat. N. E. Shaver. (Studies in natural history, v. 8, no. 2)
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Conservation of sugar. E. Horn and M. M. McBroom. (B. 32) (10c)
- Iowa Dairy and food commission, Des Moines**  
Care of milk in the home. (B. 18)  
Dairy law effective April 17, 1919, containing amendments and new acts of the 38th general assembly  
Egg regulations. (B. 23)  
Law relative to containers of dairy products and tentative regulations. (B. 22)  
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Pure food law of the state of Iowa, effective May 1, 1919  
Report for the year ended Oct. 31, 1918  
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- Iowa Department of fish and game, Des Moines**  
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- Iowa Department of public instruction, Des Moines**  
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Supporting strength of drain tile and sewer pipe under different pipe-laying conditions. W. J. Schlick. (Eng. exp. B. 57)  
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- Iowa State highway commission, Ames**  
Report for the year ended Dec. 1, 1917  
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Some significant aspects of the agrarian revolution in the United States. L. B. Schmidt
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Report for the year 1918, containing the proceedings of the 53d annual session, Des Moines, Ia., Dec. 10-12, 1918; also transactions of the auxiliary societies. (Vol. 53)
- Iowa State teachers college, Cedar Falls**  
Proceedings of the 1st National conference on rural school consolidation held at Cedar Falls, Ia., Feb. 17-19, 1920. (B. v. 20, no. 4, pt. 2)
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- Ireland Department of agriculture and technical instruction, Dublin**  
Report of the Departmental committee on the decline of dairying in Ireland. (Cmd. 808) (4d)
- Irish agricultural organisation society, ltd., R. A. Anderson, sec., Plunkett House, Dublin**  
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- R. Istituto superiore forestale nazionale, Firenze, Italia**  
La legislazione forestale nelle terre redente. (Pub. 3)  
Per l'approvvigionamento del legname nel dopo guerra. (Pub. 1)
- Jacques et Demontrond, Besancon, France**  
Le régime des forêts en Roumanie
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- James manufacturing company, Dept. of educational service, Fort Atkinson, Wis.**  
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Solving the hired help problem. (B. 3)
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Year book, 1920-21, p 536-56, Agriculture
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Pasture studies: some results. T. J. Jenkins
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- Kansas Department of public instruction, Topeka**  
Supplementary outline course of study for rural and graded schools, school year 1920-1921
- Kansas Entomological commission, Topeka**  
Report for 1917-1918
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Farmers' short course and the commercial creamery short course; January 6 to March 1, 1919. (B. v. 2, no. 13)  
Score card for rural schools. E. L. Holton and V. L. Strickland. (B. v. 2, no. 9)  
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Birds—their practical benefit. G. A. Blair;  
Farm wood lot—a state asset. F. L. Kenoyer
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- Kearny forester, The, Town Hall, Kearny, N.J.**  
10th annual report of the Kearny shade tree commission, 1919
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- Kennedy, P. B., Univ. of Cal., Coll. of ag., Berkeley**  
Annotated list of the wild flowers of California. P. B. Kennedy
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Farmers' union. C. B. Fisher. (Studies in econ. and sociology no. 2) (\$1)
- Kentucky Bureau of agriculture, labor and statistics, Frankfort**  
23d biennial report for 1918-1919
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 Amount of standing timber in Kentucky. J. E. Barton. (*In Resources of Ky.*, v. 1, no. 3, p. 251-84)  
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 Suggestions on courses in agriculture for the Smith-Hughes high schools of Kentucky. M. C. James
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 Food and drug laws. (B. v. 9, no. 10)  
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- Kentucky State entomologist, Lexington**  
 Inspection of nursery stock in Kentucky. H. Garman  
 Orchard spraying. H. Garman
- Kentucky State live stock sanitary board, Frankfort**  
 Laws affecting the State live stock sanitary board and state and county live stock inspectors
- Kerr, W. H., Great Bend, Kan.**  
 Farmers' union and federation advocate and guide. W. H. Kerr. (\$1)
- King, P. S. & son, Ltd., Orchard House, Westminster, London, S.W. 1**  
 Great Britain. Home office. Committee on anthrax; Report of the departmental committee appointed to inquire as to precautions for preventing danger of infection from anthrax in the manipulation of wool, goat hair and camel hair. (Cd. 9171) 6d; (Cd. 9172) 1s 6d  
 Great Britain. Ministry of food; Manuals of emergency legislation: food supply manual, revised to July 31, 1918, comprising the food controller's powers and orders, and orders of other departments ancillary thereto. ? price  
 Report of the Food investigation board for the year 1918. (3d)  
 Report on the employment on the land of returned sailors and soldiers, together with a report by R. V. Lennard of the Great Britain Ministry of reconstruction, Advisory council. (1s)  
 Study of factors concerned in the production of clean milk. E. G. Knight and others. (pt. 1) (1s)  
 3d interim report of the Great Britain Bd. of ag. and fisheries, Committee on production and distribution of milk
- Ladies home journal, Independence sq., Philadelphia**  
 Foods that build the body. A. Barrows. (10c)
- Leland Stanford junior university, Stanford University, Cal.**  
 California species of mealy bugs. G. F. Ferris. (\$1)
- Liberty publishing company, Rochester, N.Y.**  
 Liberty manual of chickens. (\$1)
- Librairie Payot & c<sup>ie</sup>, 1 Rue de Bourg, Genève, Switzerland**  
 Le hanneton; biologie, apparition, destruction; un siècle de lutte organisée dans le Canton de Zurich; expériences récentes. M. Decoppet
- Little, Arthur D., inc., Cambridge, Mass.**  
 Reading list on molasses. C. J. West, comp. (Bibliographic Ser. 5)
- Live stock feeding association, Pleasant Hill, Ohio**  
 How to feed for bigger live stock profits
- London Times trade supplement, Printing House sq., London, England; American Office, The Northcliffe press, 280 Broadway, N.Y.**  
 Articles relating to agriculture indexed each week
- Long-Bell lumber company, Kansas City, Mo.**  
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- Louisiana Department of conservation, New Orleans**  
 Birds of Louisiana. S. C. Arthur. (B. 5)  
 Brief survey of the natural resources of Louisiana. (B. 2)  
 Conservation laws of Louisiana, 1918  
 4th biennial report, Apr. 1, 1918-Apr. 1, 1920  
 Why and the how of forestry in Louisiana. R. D. Forbes. (B. 7)
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 Advancement of pupils through the grades in rural schools. J. M. Foote. (B. 8)  
 Year's work in vocational agriculture, plant production. P. L. Guilbeau. (B. 10)
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 Farm and garden books, 1919  
 Keys to the orders of insects. F. Balfour-Browne. (\$3)
- Madras Forest department, Madras, India**  
 Administration report for the 12 months ending 30th June 1918. (1s 6d)  
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- Maine Department of health, Augusta**  
 Food for the family. A. G. Young. (B. v. 2, nos. 4 & 5)  
 Rural methods of waste disposal. H. D. Evans. (B. v. 2, no. 1)
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 Classified list of American literature on forestry subjects for general reading and reference. J. M. Briscoe  
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 Forest protection and conservation of Maine, 1919, F. H. Colby  
 Law creating fire district as amended; instructions to wardens; list of wardens appointed  
 Report on the spruce budworm. M. W. Blackman  
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 4th annual report, 1916
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 Act to regulate cold storage of certain articles of food. (Senate no. 17)
- Manhattan single tax club, 47 W. 42d st., N.Y.**  
 Farmer and the single tax. J. R. Brown. (2d ed)
- Manitoba agricultural college, Winnipeg**  
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 Forty-four ways to win the war
- Maryland agricultural society, T. B. Symons, sec., College Park**  
 Report for the year 1917. (Vol. 2)  
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- Maryland College of agriculture, College Park**  
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 Basket willow culture in Maryland. K. E. Pfeiffer  
 Forests of Baltimore county. F. W. Besley  
 Our forests; keep them growing. (Forestry leaflet 21)  
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 State reserves of Maryland; a playground for the public. J. G. Dorrance  
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 Tile drainage. J. A. King
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 Opportunities for women in agriculture and country life. (B. v. 12, no. 4)
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 Some of the latest and best books on agriculture. (List no. 8)
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 Consolidation of schools and transportation of pupils at public expense in Massachusetts. (B. 1920, no. 6, whole no. 115)
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 Carbohydrate foods. A. W. Sandwall  
 Fats and their value in the diet. A. W. Sandwall  
 Food for the child. A. W. Sandwall  
 Food—what it is and what it does A. W. Sandwall. (rev. ed.)  
 How cooking affects the digestibility of foods. A. W. Sandwall  
 Importance of minerals in the diet. A. W. Sandwall  
 Laws relating to milk and milk products  
 Nutrition of children. F. B. Talbot  
 Outline for nutrition classes. M. M. Smith  
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 How shall the state forests be financed? H. A. Reynolds. (B. 129)  
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 Selected list of books on domestic production and preservation of food: gardening, canning, economic cookery. (Brief reading lists no. 2)
- Massachusetts State board of forestry**, State House, Boston  
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 Reforestation in Massachusetts. J. R. Simmons
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 Manurial experiments with sugar-cane. H. A. Tempany. (Gen. Ser. B. 14) (English ed.)
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- Metropolitan life insurance company**, 1 Madison av, N.Y.  
 All about milk. M. J. Rosenau
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 Laws relating to the Department of animal industry. C. C. Vaughan, comp.
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 Michigan crop report, April 1, 1919
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Bread making in war time. M. C. Mosher. (Spec. B.)
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- Milk inspection association of the Oranges,** J. O'Brien, sec., Orange, N.J.  
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Land; its colonization—the Milwaukee idea. F. W. Luening
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Organic matter of the soil: a study of the nitrogen distribution in different soil types. C. A. Morrow
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**U.S. Congress. House—Continued**

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**U.S. Congress, House committee on irrigation of arid lands, Washington, D.C. Apply to congressmen**

Application of the reclamation law to irrigation districts: hearings on H. R. 2702

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**U.S. Congress, House committee on the public lands, Washington, D.C. Apply to congressmen**

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**U.S. Congress. Senate, Washington, D.C., Apply to congressman**

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**U.S. Congress. Senate committee on irrigation and reclamation of arid lands, Washington, D.C. Apply to congressmen**

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Newsprint paper industry; hearings before a subcommittee of the Committee on manufactures, United States Senate, 66th Cong., 2d sess., pursuant to S. res. 164; a resolution authorizing the committee on manufactures to investigate the newsprint paper industry (executive session, May 4-14, 1920)

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Statement of the purpose and scope of the Boys' working reserve

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\* Explanation: Subject headings are in boldface type. The magazine entry proper is formed of items in the following order: The title of the article; the author; the illustrations, plans, maps, etc.; the name of the magazine abbreviated (the "List of Periodicals Indexed" on page — gives full name of magazine); the volume number and the paging, separated by a colon; the date. For example, an entry under Aberdeen Angus cattle, "Aberdeen-Angus—a real beef breed. T: F. McConnell. il Pacific Rural Press 99:369 Mr 6 '20" indicates the article entitled "Aberdeen-Angus—a real beef breed," by T: F. McConnell, in Pacific Rural Press, Volume 99, on page 369 of the issue of March 6, 1920 is on the subject of Aberdeen Angus breed of cattle.



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**Cabbage root maggots.** See Cabbage maggots

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**Cacao pod rot**

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Farm women of Canada have organized a national council to be known as the Inter-provincial council of farm women of Canada. It is for the purpose of coordinating the work of the provincial organizations, and to provide national machinery for the conduct of the vast amount of national business which is constantly coming before women of various provinces

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See also Fertilizers, Commercial—Prices

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- Suggestions for plant growers. *Am Flor* 53: 1013; 54:245 D 6 '19, F 21 '20



**Floriculture—Continued**

This month in the ornamental garden. Appears in California cultivator each month, usually in the issue for first week

See also Annuals (plants); Bulbs; Flowers; Gardening; Greenhouses—Flower growing; House plants; Perennials; Plant breeding; Plant propagation; Window gardening; also names of flowers, e. g., Carnations, Irises, Roses

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Excellence marks Jacksonville show. il Swine World 7:25 D 20 '19

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**Florists**

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Card-indexing customers. Am Flor 53:182 Ag 16 '19

Christmas in Philadelphia shops. Am Flor 51:1118 Ja 4 '19

Christmas suggestions. il Am Flor 51:965-8 D 14 '18

Christmas trade. Am Flor 53:1234+ Ja 3 '20  
Economy. Am Flor 51:518 O 5 '18

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How to make a small greenhouse pay. E. Williams. Am Flor 52:533 Ap 5 '19

How to make both ends meet. B. F. Barr. Am Flor 51:614 O 19 '18

Increased production will be profitable. Am Flor 52:194 F 15 '19

Lancaster county florists' association. A. M. Herr. Am Flor 53:830 N 8 '19

Making a profit. P. Richter. Am Flor 51:762 N 9 '18

Miller floral co.'s new store. il Am Flor 51:608 O 19 '18

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Next week in the flower shop. Am Flor 51:609; 53:968, 1135, 1186; 54:55 O 19 '18, N 29, D 20-27 '19, Ja 24 '20

One man shops. Am Flor 51:835 N 23 '18

Organizing the trade. M. Kaiser. Am Flor 56:1176 Jl 9 '21

Our business. R. Craig. Am Flor 51:922 D 7 '18

Outlook for floriculture in 1919. S. S. Pen-nock. Am Flor 52:241 F 22 '19

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Salesmanship and policy. R. C. Kerr. Am Flor 57:407-8 S 10 '21

Say it with flowers. H. P. Knoble. Am Flor 51:606-8 O 19 '18

Season's prospects. Am Flor 53:965 N 29 '19

South as cut flower market. R. C. Kerr. Am Flor 52:290 Mr 1 '19

Store philosophy. Am Flor 56:804 My 14 '21

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Profits and how to figure them. Am Flor 55:429 S 11 '20

Sales and profits. H. Jolly. Am Flor 52:645-7 Ap 19 '19

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**Florists' associations**

Co-operation and organization. J. F. Ammann. Am Flor 57:196 Ag 13 '21

Co-operation through florists' clubs. G. M. Geraghty. Am Flor 51:878 N 30 '18

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Growers' need of organization. J. Kohout. Am Flor 54:741 Ap 24 '20

Indiana and Kentucky florists' ass'ns; joint meeting and exhibition. Am Flor 53:902-4 N 22 '19

*See also* Allied florists' trade association; American carnation society; American dahlia society; American gladiolus society; American iris society; American peony society; American rose society; American sweet pea society; British florists' federation; California dahlia society; Chrysanthemum society of America; Commercial flower growers' association; Florists' club of Philadelphia; Florists' telegraph delivery association; Illinois state florists' association; Lancaster county florists' association; Michigan state florists' association; Missouri state florists' association; National flower growers' association; National rose society (English); Nebraska state florists' society; New York florists' club; Society of American florists; Tennessee state florists' association; Texas state florists' association; Tri-state florists' association; Western New York publicity fund

**Florists' club of Philadelphia**

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**Florists' plants**

Autumn care of plant stock. C. W. Johnson. Am Flor 53:601 O 11 '19  
Care of plants in stores. J. Bennett. Am Flor 51:742 N 9 '18

Flowering pot plants. C. W. Johnson. Am Flor 55:198-9 Ag 14 '20

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How to propagate bedding plants by cuttings. T. J. Sheward. il Gard Chron Am 23:46-7 F '19

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*See also* Christmas plants; Easter plants; Greenhouses; House plants; also names of plants, e.g. Acacias, Cinerarias, Cyclamens, Isoloma, Poinsettias, Verbenas

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Annual meeting, Indianapolis, Ind., October 12-13. Am Flor 55:665-70, 717-25 O 16-23 '20

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Florists' telegraph delivery activities. K. P. Baum. Am Flor 56:520 Ap 2 '21

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Foreign F. T. D. membership. A. Pochelon. Am Flor 53:968 N 29 '19

Meeting, Detroit, Mich., Aug. 19. Am Flor 53:269 Ag 23 '19

9th annual meeting at Cleveland, O., Oct. 8-9. Am Flor 51:516, 557-63, 605-8 O 5-19 '18

Selling flowers by telegraph. F. C. W. Brown. Am Flor 53:61-2 O 18 '19

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*See also* Bean flour; Cottonseed flour; Flour industry; Flour milling; Flour mills; Potato flour; Wheat conservation

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La détermination du taux de blutage de la farine par l'action de l'eau oxygénée. Marion. Génie Civil (6, rue la Chaussée-d'Antin, Paris (9<sup>e</sup>), France 2 fr.) 77:542 D 25 '20

*See also* Wheat—Milling and baking tests

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- List of flour mills in Canada, 1920. 18p '20 Canada Dept. of trade and commerce, Ottawa
- Mill for Kansas farmers companies. Am Coop J 15:18 Mr '20

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Recently completed Hubbard milling plant. il Coop Manager & F 9:49 S '19

Shall farmers organization go into the milling business? Am Coop J 15:6 Je '20

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Wilder, Idaho, to have a new flouring mill. il Coop Manager & F 10:45 S '20

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**Flower boxes.** See Porch boxes

**Flower festivals**

Rose festival at Portland. W: B. Stoddard. il Am Flor 54:1271 Jl 10 '20

Spring flower festivals in Japan and California. il Literary Digest (354 4th av, N.Y. 10c) 65:84-7 My 8 '20

**Flower gardens.** See Floriculture; Flowers; Gardening; Gardens

**Flower pots**

Potting explained. P. B. Prior. il Gard M 33:30 Mr '21

**Flower shows**

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- Antwerp floral exhibition. Gard Chron (Lond) 67:233, 244 My 8-15 '20
- Arrangement of flowers in exhibitions. Gard Chron (Lond) 69:217 My 7 '21
- Arrangement of flowers in public exhibitions. T: Allen. (B. 6) 25-30p '21 Mass. hort. soc., Boston
- Boston flower show, Boston, Mass., April 6-10. il Am Flor 56:617-20 Ap 16 '21
- Boston orchid show, Mar. 24-28. il Am Flor 54:593-5, 647 Ap 3-10 '20
- California dahlia society show. Am Flor 53: 517 S 27 '19
- Chelsea show. il Gard Chron (Lond) 67:298-9 Je 12 '20
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- International flower show. Gard Chron Am 25: 552+ Ap '21
- Morris county, N.J. society's exhibition. Am Flor 55:822 N 6 '20
- National rose show to be held in Boston, April 6-10. Am Flor 56:531 Ap 2 '21
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 Beautifying the home grounds. M. L. Adams. *il Am Fruit Grower* 40:53 Ap '20  
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 Flowers. Mrs M. E. Chandler. *Kan Hort Soc Rep* 1917:140-3 '18  
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Late Mr T. R. Thompson's Herefords. Live Stock J 92:444 O 29 '20

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Layton Flower Herefords popular. Breeder's Gaz 75:1368 Je 5 '19

Linn Grove Herefords at \$751. Breeder's Gaz 75:1186 My 15 '19

McCray's Herefords average \$2,749. Breeder's Gaz 77:1477 My 27 '20

McCray's 120 Herefords bring \$436,250. Breeder's Gaz 75:1309 My 29 '19

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Minish Herefords realize \$417. Breeder's Gaz 75:73 Ja 9 '19

More & son's Hereford vendue. Breeder's Gaz 75:1062 My 1 '19

173 Herefords for \$332,100. Breeder's Gaz 75: 1185 My 15 '19

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Record Hereford sale. il Field II 29:105 F '19

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2d Hereford round-up. Breeder's Gaz 75:609 Mr 13 '19

Seven western Hereford sales. il Field II 30: 655-7+ JI '20

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 State shippers are organized. O Judd Farmer 68:445 F 28 '20
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 Illinois-Missouri milk producers' association organized. C. Larson. Hoard's *D* 61:632 Ap 29 '21
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Change in municipal insurance against hail in Alberta. Int R Ag Econ 10, no 1:42-4 Ja '19

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- Insurance against hail in 1917 in France. Int R Ag Econ 9,no 9:725-6 S '18
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- Décret organisant l'assurance sociale obligatoire contre les maladies en Portugal. Int Yearbook Ag Leg 1919:669-78 '20
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- Compulsory insurance of live stock in 1916 in Switzerland. Int R Ag Econ 9,no 5:395-7 My '18
- Co-operative insurance of live stock. J Ag (Quebec) 23:110, 134 D '19-Ja '20
- Décret royal créant une institution dénommée mutuelle nationale d'assurance agricole et du bétail en Espagne. Int Yearbook Ag Leg 1919:639-42 '20
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- Federation of live stock mutual societies during the war. Int R Ag Econ 11,no 1:37-9 Ja '20
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- Insurance, Social**
- Arrêté royal instituant auprès du ministère de l'industrie, du travail et du ravitaillement une commission des assurances sociales en Belgique. Int Yearbook Ag Leg 1919:626-8 '20
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- Insurance, State and compulsory.** See Insurance, Unemployment; Old age pensions
- Insurance, Unemployment**
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New regulations for agricultural mutual insurance societies in Italy. *Int R Ag Econ* 11,no 7:476-84 J1 '20

**Intelligence tests. See Ability tests**

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The C. S. I. R. H. P. Armsby. *Penn State F* 12:39 Mr '19

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Proceedings of the 4th annual convention at the School of forestry, Yale univ., New Haven, Conn., Feb. 27-28, 1920. 69p n.d. Intercollegiate assn. of forestry clubs, New Haven, Conn.

**Intercropping. See Companion crops**

**Interest**

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**Interior decoration. See House decoration**

**Inter-mountain fair**

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Papers include: Modern developments in dairy inspection, by E. Kelly; Sediment test as applied to dairy inspection, by W. E. Ward; Methods of detecting tuberculosis in cattle, by J. J. Linters; Market milk situation in Minnesota, by M. J. Smisek; Control of milk supplies in seven southern extra-cantonment zones, by W. H. Price; Supply of milk for army cantonments, by J. H. Sasseen; Market milk conditions in Iowa, by O. P. Thompson; Observations on the pasteurization and subsequent handling of milk in city milk plants, by R. S. Smith; Simplified city milk inspection, by H. A. Harding; Pasteurization of milk, by F. J. Moore; Committee reports; Bovine diseases—their relation to the milk supply and to the public health; Diseases of man—their relation to the milk supply and to the public health; New legislation affecting milk and milk products; Dairy farm inspection; Transportation and marketing of milk and milk products; Methods of bacterial analyses of milk and milk products; Organization and administration of milk control; Construction of dairy buildings and its relation to sanitation; Remade milk; Pasteurization of milk and cream; Food value of milk and milk products; Resolutions

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of tubercle bacillus in human tuberculosis, by C. Krumwiede; Milk situation in Philadelphia, by C. B. Lane; Milk inspection association of the Oranges, N.J., by W. E. Palmer; Points from the Delineator, "Save the Seventh Baby Campaign", by H. N. Parker; Studies on the composition of market milk in Massachusetts, by C. E. Marsh; Dairy and milk inspection in California, by C. L. Roadhouse; Milk supply of Newport, R.I., by J. F. Johnston; Use of chlorinated lime in the sterilization of milk utensils, by G. B. Taylor; Milk inspector and milk plant operation, by C. E. Clement; Pasteurization of milk, by C. H. Kilbourne; Bacterial control in milk plants, by R. S. Smith; Bottles for laboratory purposes, by I. C. Weld; Milk supply of New York City, by O. Salthé; Committee reports: Organization and administration of milk control; Dairy farm inspection; Methods of bacterial analysis of milk and milk products; Food value of milk and milk products; Remade milk—pt1. Commercial and economical aspects of remade milk, pt2. Effect of remade milk on the dairy industry, pt3. Results of feeding infants on remade milk, pt4. Legislative restrictions necessary for remade milk, pt5. General conclusions of the committee; Transportation and marketing of milk and milk products; Pasteurization of milk and cream; Construction of dairy buildings and its relation to sanitation

9th annual convention held during Dairy show week. *N Y Prod R* 50:1442+ O 20 '20

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World's poultry congress. *J Ag* (Quebec) 23: 14 J1 '19

**International baby chick association**

Annual convention, Philadelphia, Aug. 3-6, 1921. *Am P Advocate* 29:533 O '21



**International baby chick association—Cont.**

Meeting, New York, Jan. 23. Reliable P J 26: 28 Mr '19

Midwinter meeting, held at Madison Square Garden, Jan. 24. Reliable P J 27:21 Mr '20  
Objects of International baby chick association. Reliable P J 26:189 Ap '19

**International Belgian horse show**

Belgian horse show in Iowa. Breeder's Gaz 80:484 O 6 '21

International Belgian horse show. Breeder's Gaz 76:667+ O 2 '19

International Belgian horse show. il Wallaces' F 44:1922 O 3 '19

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International Belgian horse show awards. Field II 29:939 N '19

Renewed interest in horse business indicated by large classes. il Wallaces' F 46:1234 O 7 '21

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Success of first congress. London Times Trade Sup 6:424 Jl 3 '20

**International child welfare conference**

International conference, Chicago, May 19-20. O Judd Farmer 66:784 My 31 '19

**International club judging contest**

Texas club boys win trip to Britain. il Breeder's Gaz 78:995 N 11 '20

**International conference of agricultural syndicates**

Conference held on 16 and 17 Nov., 1920. Int R Ag Econ 12,no 1:10-13 Ja '21

**International conference of women physicians**

Women doctors to the rescue. M. L. Wilson. Successful F 19:202 F '20

**International conference on epizootic diseases of domestic animals**

International conference on epizootic diseases of domestic animals, Paris, May 1921. Am Vet M Assn J 60:124-38 O '21

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1st International congress of agricultural laborers, Amsterdam, Holland, Aug. 17-19, 1920. Int R Ag Econ 11,no 12:853-4 D '20

**International congress of eugenics**

2d International congress of eugenics, New York City, Sept. 22-28. J Heredity 12: 219-23 My '21

**International congress of home economics instruction**

Letter from the Office international de l'enseignement menager, Fribourg (Suisse) to the Office of home economics, United States Department of agriculture. J Home Econ 12:465-8 O '20

**International congress on seed testing**

3d International congress on seed testing at Copenhagen. C. B. Saunders. J Ministry Ag 28:296-7, 551-3 Jl, S '21

**International cotton congress**

World's cotton shortage; International congress at Zurich. London Times Trade Sup 6:345 Je 12 '20

**International crop improvement association**

International crop improvement association organized. Dakota F 40:278 F 1 '20

**International dairy exposition (Argentina)**

Ideas from the South American international. D. S. Bullock. il Dairy F 19:550 N 15 '21

**International farm congress**

Constitution of the International farm congress. Ag R 13:13 Mr '21

**International federation of the horticultural trade**

International horticultural traders in conference. Gard Chron (Lond) 66:157 S 20 '19

**International garden club**

Nevis; the new home of the International garden club, at Ardsley-on-the-Hudson. il Arts and Decoration (470 4th av, N.Y. 35c) 11:293 O '19

**International harvester company**

Extension of education to the American farmer. J. G. Merrison. map J Bd Ag 26:881-91 D '19

Harvester and the cost of living. H: I.

Dodge. il Country Gent 84:17-18 F 8 '19

Service, the duty of citizenship. E. W. Cooley. il map Farming 19:210-11 Ja '21

Turning out 100 tractors per day. P. M. Heldt. il plan Automotive Industries (231 W. 39th st, N.Y. 15c) 40:788-92, 852-7 Ap 10-17 '19

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Bulletin of foreign agricultural intelligence; index 1910-1916. 79p n.d. Canada Ag

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Canada 7:702-4 Ag '20

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Je 22 '21

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1920. Int R Ag Econ 11,no 12:833-41 D '20

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Organization and growth. Sci Am (233 Broad-

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Formation of an International institute of

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**International live stock exhibition (Argentina)**

Live stock exhibition in Argentina. J Ministry

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**International live stock exposition**

Aboard for the International. Dakota F 39:1721

N 1 '19

Annual show; with list of awards. il Wal-

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Biggest year of the greatest show. O Judd

Farmer 68:1719 D 11 '20

Canada at the great International. il Nor'-

West F 39:1710-11 D 20 '20

Canada strongly represented at the 1920 In-

ternational show. il Farmer's Advocate

55:2116-17 D 9 '20

Chicago International show. Live Stock J 92:

659 D 31 '20

Chicago's International show. Live Stock J

91:15 Ja 2 '20

Clydesdales at International. il Field II 29:17

Ja '19

College live stock wins prizes. F. L. Bentley.

il Penn State F 12:11 F '19

Creditable display of swine at the Interna-

tional. Swine World 6:20-1 D '18

Entries for the International show. Breed-

er's Gaz 76:1033+ N 13 '19

Great International. il Successful F 20:54+

Ja '21

Great live stock show. il Rural N Y 79:1898,

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Indiana and Purdue win again. C. F. Gobble.

il Purdue Ag 15:139-40 Ja '21

Indiana animals win many prizes. il Purdue

Ag 14:183-4 Ja '20

International. A. Wenz. il Dakota F 39:3 Ja

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International exposition, Chicago. J. J. Crid-

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144:731+ D 13 '19

International live stock exposition; list of

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- International livestock exposition notes. Prog F 34:2084 D 13 '19
- International livestock show. il Field II 31:18-22+ Ja '21
- International opening. Breeder's Gaz 74:1013-14 D 5 '18
- International show entries. Breeder's Gaz 80:668 N 10 '21
- International show; most colossal exhibit ever staged makes 20th exposition a record breaker. il Field II 30:13-17+ Ja '20
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- Michigan agricultural college exhibit at the 1918 International. Mich Ag Exp Quar B v 1:114-20 F '19
- Milking shorthorns at International. Hoard's D 56:780 D 27 '18
- 1918 International. il Am Sheep B & W 38:767-86 D '18; Field II 29:12-16+ Ja '19
- 1918 International. F. C. Minkler. Rural N Y 78:20, 58 Ja 4-11 '19
- 1919 International. il Nat Stock & F 43:1076-7+ D 13 '19
- 1920 International livestock show. il Nat Stock and F 44:1100+ D 11 '20
- Poland China at the International. Swine World 6:12 D '18
- Poland Chinas at the International. R. C. Ashby. il Swine World 7:5-8 D 20 '19
- Premium won at the International livestock exposition, Chicago, Nov. 29 to Dec. 6, 1919. Penn State F 13:140 Ja '20
- Purdue at 1918 International. C. F. Gobble. Purdue Ag 13:151 Ja '19
- Rams and ewes at the International. il Am Sheep B & W 40:17-21+ Ja '20
- Sheep and swine at the International. Rural N Y 78:199 F 1 '19
- Show for show men. T. E. Wilson. il Field II 28:897 D '18
- 16th exposition, Chicago, Nov. 30-Dec. 7. W. H. Tomhave. Prac F 115:2, 33 Ja 1-15 '19
- 16th International, 1918. il Breeder's Gaz 74:1046-1060a+ D 12 '18
- South again demonstrates the fact that its livestock can win. L. T. Wells. Prog F 35:1987 D 18 '20
- Supreme court in livestock; the International; with lists of awards. il Dakota F 39:1973-83+ D 15 '19
- 20th annual exposition, Chicago, Nov. 29-Dec. 6. W. H. Tomhave. il Prac F 116:3+ Ja 1 '20
- 20th annual show and exposition. il Wallaces' F 44:2460 D 12 '19
- 20th exposition, Union stockyards, Chicago, Nov. 27-Dec. 4. J. T. E. Dinwoodie. il Dakota F 40:2003-6 D 15 '20
- 20th International anniversary show. Breeder's Gaz 76:1147 N 27 '19
- 20th International show, Chicago. Breeder's Gaz 76:1255-67+ D 11 '19
- 21st International livestock, hay and grain show, Chicago, Nov. 26-Dec. 4. il Ohio F 146:691 D 11 '20
- Views of the International livestock exposition. C. P. Fague. Penn State F 13:169+ F '20
- What is the International? Breeder's Gaz 80:696 N 17 '21
- World's greatest show. O Judd Farmer 67:887 D 13 '19
- World's greatest stock show. il Breeder's Gaz 78:1256-69+ D 9 '20
- Worshippers at an old shrine. R. V. Hoffman. Field II 28:891-6 D '18
- International milk dealers' association**
- Few of the reasons for joining the International milk dealers' association. R. E. Little. Creamery 10:45-6 S '21
- 14th annual convention, St Paul, Oct. 13-14. N Y Prod R 52:1429 O 19 '21
- One year's work among the milk dealers. R. E. Little. Creamery 10:30 N '21
- Opening address at milk dealers' meeting. F. N. Martin. Creamery 10:27 N '21

**International potato conference, London**

London international potato conference. H. V. Taylor and A. D. McKenzie. il Potato M 4:5-6 S '21

**International potato show, Duluth**

Big exposition to be held in Duluth, Oct. 26-28, 1921. Potato M 4:11 S '21

**International review of the science and practice of agriculture (periodical)**

Two important agricultural review journals. E. L. Ogden. Special Lib (108 Jersey st, The Fenway, Boston 25c) 10:32-5 Mr '19

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**Jerseymen.** Few random thoughts for. J. C. Sibley. Jersey B 39:2932-4+ O 27 '20

**Jerseys**

About Cuban Jerseys. D. W. Millar. Jersey B 38:1274 Jl 9 '19  
Address to Jersey breeders. L. D. Cowden. Jersey B 39:1930 Jl 21 '20  
And lies down to pleasant dreams. H. Jenkins. il Jersey B 40:2046-7 Ag 17 '21  
Another great herd starts. il Jersey B 38: 1140 Je 18 '19  
Bank sells Jerseys. Jersey B 38:2582 D 17 '19  
Belmont county Jersey sale. Ohio F 147:652 My 14 '21  
Best way to make a start with Jerseys. G. H. Conn. il Jersey B 39:937-8 Ap 21 '20  
Billy Sunday buys Jerseys. H. Jenkins. Jersey B 38:2074 O 15 '19  
Breeder who neither owns or runs a farm. C. T. Conklin. il Jersey B 39:1401 Je 2 '20  
Breeds of livestock—dairy cattle; Jerseys; description and breed characteristics. il Prog F 35:72 Ja 10 '20  
Brilliant record by New Jersey breeder; Forest Hills farm. il Jersey B 38:2171 O 29 '19  
British Columbia holds great distinction. B. A. Bull. il Jersey B 39:865 Ap 14 '20  
Building up a dairy herd on a North Dakota wheat farm. F. Page. Dairy F 18:283 Mr 15 '20  
Building up a good Jersey herd on sane basis. Jersey B 39:678b Mr 24 '20  
Bull association in Washington. Kimball's D F 17:644 Je 15 '19  
Bulls sold by Ore. agri. college. S. Fine. Jersey B 38:1162 Je 18 '19  
Canadian Jersey activities during 1920. B. A. Bull. Jersey B 40:821-3 Ap 13 '21  
Cedar Crest farm on beautiful Fox lake. C. P. Huntington. il Jersey B 39:10 Ja 7 '20  
Class AA Jersey breeder. A. L. Tichane. Jersey B 39:574 Mr 17 '20  
Class leaders by states. Jersey B 38:478, 571 Mr 19, Ap 2 '19  
Climbing not soaring. F. W. Ayer. Jersey B 38:1824 S 24 '19  
Cow there was. E. M. Prewitt. il Jersey B 38: 385 Mr 5 '19  
Cowdray sale of Jersey cattle. Live Stock J 92:321 S 24 '20  
Cultivating winners a specialty at Brampton. H. Jenkins. il Jersey B 40:831-4 Ap 13 '21  
Dairymen visit Jerseys in Alabama. il Jersey B 39:573 Mr 17 '20  
Day's visit among Virginia's Jersey herds. W. Macmonnies. Jersey B 40:576 Mr 16 '21  
Developing a Jersey center. E. M. Harmon. il Jersey B 38:2449 D 3 '19

Did Bully Sunday set the pace? H. Jenkins. Jersey B 38:2430 N 26 '19  
Eastern herds show quality. D. Aikman. Jersey B 38:1430 Jl 30 '19  
Eminent blood in Tennessee herds. J. J. Murray. Jersey B 40:1114 My 11 '21  
Eminents. A. M. Bowman, jr. il Jersey B 38: 1847+ S 24 '19  
Encouragement for the little breeder on the hillside. R. R. Graves. il Hoard's D 58: 699+ N 7 '19  
Enterprising breeders choose sires. Jersey B 38:2083 O 15 '19  
Experiences of a pioneer breeder. M. L. Eckles. Jersey B 39:2336 S 1 '20  
Famous herd of Jerseys. W. McMonnies. il Country Life 38:32f My '20  
Fauvic's Prince, Jersey monarch. il Field II 31:361-2 My '21  
Favor registering Cuban Jerseys. Jersey B 38: 259 F 12 '19  
Financial King family. H. G. Van Pelt. il Jersey B 38:1854-5 S 24 '19  
Financial King's Interest. 235065. J. V. Cotta. Jersey B 38:382 My 14 '19  
Financial Sensation's trip a complete triumph. A. L. Tichane. il Jersey B 38:803-4 My 7 '19  
First Jersey cost \$5—sold as high as \$1,500. O. H. Barnhill. il Jersey B 39:3431 D 22 '20  
Folck herd sold. Jersey B 38:2607 D 24 '19  
Fountains of youth in Florida. A. L. Tichane. il Jersey B 38:755 Ap 30 '19  
Four Jersey week sales. il Field II 31:536-7+ Jl '21  
Future of the Jersey in the Ozarks. E. G. Bennett. il Jersey B 40:459-60+ Mr 2 '21  
Getting on with Jerseys. W. Johnson. il Country Gent 86:7+ My 28 '21  
Getting pay dirt in the bull. A. C. Ragsdale. Jersey B 38:1227-8 Jl 2 '19  
Gigantic deal in Jersey business world; Mr Edmond Butler sells his herd and business to Ayer & McKinney; what each party will do. Jersey B 40:290 F 9 '21  
Go into debt if necessary. E. L. Westover. il Jersey B 38:1182 Je 25 '19  
Gold medal bulls of Oregon. L. W. Wing, jr. Jersey B 38:1028 Je 4 '19  
Golden Glow family. D. B. Hogan. Jersey B 38:2371 N 19 '19; Jersey B 38:1886 S 24 '19  
Golden Jolly's. G. C. Smith. il Jersey B 38: 1869+ S 24 '19  
Golden Tycoon goes South permanently. il Jersey B 39:158 Ja 28 '20  
Good example to follow. Jersey B 38:2354 N 19 '19  
Greatest living son of Gamboge's Knight. H. Jenkins. Jersey B 40:1562-3 Je 22 '21  
Greatest mother of them all. E. M. Prewitt. il Jersey B 38:6 Ja 1 '19  
Hats off to Longview! well said. R. R. Fleming. Jersey B 39:3336 D 8 '20  
He loves his Jerseys, therefore succeeds. R. R. Thomasson. il Jersey B 39:2107 Ag 11 '20  
Herd improvement through the use of a better sire. Jersey B 40:379 F 16 '21  
High Pastures farm selected the Jerseys. R. L. Williams. Jersey B 40:405 F 23 '21  
High school girl has city herd. il Jersey B 38:2349 N 19 '19  
High testing breed—the Jersey. il Nor'-West F 39:1485 N 5 '20  
Highest producing herd in Vermont. M. R. Tolstrup. Dairy F 17:732 Ag 1 '19  
Hillside Torono. J. H. Putnam. Jersey B 38:638 Ap 9 '19  
Hood farm Jerseys go to palatial home. il Dairy F 18:94 F 1 '20  
How stands the Jersey? Live Stock J 92: 545 N 26 '20  
How we capitalize our location. R. E. Hutchison. il System on the Farm 4:67-70 F '19  
Idaho's first Jersey jubilee is great success. F. R. Cammack. Jersey B 40:1663+ Jl 6 '21  
In the Tennessee blue grass section. B. Bell. Jersey B 40:1201 My 18 '21  
Inheritance of Jersey colors. J. J. Hooper. J Dairy Sci 2:290-2 Jl '19  
Interested Jap's Santa, the champion California Jersey cow. F. W. Woll. Hoard's D 58:552 O 17 '19



## Jerseys—Continued

- Interesting deal out West. J. E. Jones. Jersey B 38:2574 D 17 '19
- Introduction of the Jersey breed in B. C. il Jersey B 39:871 Ap 14 '20
- Island of Jersey in an Oregon valley. S. Fine. il Jersey B 38:2167-9+ O 29 '19
- Jap-Sayda family. R. E. Hutchison. il Jersey B 38:1890 S 24 '19
- Jersey boom is on. A. L. Tichane. Jersey B 38:965 My 28 '19
- Jersey bull association in Missouri. S. Babcock. Hoard's D 58:586 O 17 '19
- Jersey bull associations in Indiana. W. O. Mills. Jersey B 38:2288 N 12 '19
- Jersey bull attends a dinner. Live Stock J 90:176 Ag 22 '19
- Jersey business good in Canada, thank you. B. A. Bull. il Jersey B 39:861-2 Ap 14 '20
- Jersey cattle at Hawkesbury agricultural college. P. Waller. il Ag Gaz of New South Wales 30:1-8 Ja '19
- Jersey cow in British Columbia. G. S. Harris. il Ag J of British Columbia 5:40-1 Ap '20
- Jersey cows bring success to Elon farm. L. A. Higgins. il Jersey B 39:1744 Jl 7 '20
- Jersey for economical production. H. B. Cooke. Live Stock J 94:479 N 4 '21
- Jersey has most solids not fat. L. A. Rogers. Jersey B 38:922 My 21 '19
- Jersey history of Rutherford co, Tennessee. W. H. Oliver. Jersey B 40:1406 Je 8 '21
- Jersey home in the West. J. L. Wann. il Purdue Ag 15:93-5 D '20
- Jersey in the South. R. M. Gow. Jersey B 38:2502 D 10 '19
- Jersey Isle of America. J. A. Robson. Jersey B 38:190 Ja 29 '19
- Jersey jubilee. (Dairy and food B. v. 8, no. 3) p 1-3 '20 Ore. Dairy and food comr., Worcester bldg., Portland
- Jersey—past and present. T. F. McConnell. Pacific Rural Press 101:765 My 28 '21
- Jersey pilgrimage into the Far West. R. M. Gow. Jersey B 39:1807 Jl 14 '20
- Jersey—premier butter breed. il Hoard's D 60:998 D 24 '20
- Jersey week, May 30-June 4. il Pacific Rural Press 101:749 My 28 '21
- Jersey world lies ahead. C. H. Darlington. Jersey B 39:750 Mr 31 '20
- Jerseys. J. E. Pickett. il Country Gent 84:9-10+ Ap 12 '19
- Jerseys and alfalfa a great team. C. P. Huntington. Jersey B 38:2677 D 31 '19
- Jerseys and fecundity. A. L. Tichane. Breeder's Gaz 77:303 F 5 '20
- Jerseys at Canadian institutions. E. S. Archibald. Jersey B 38:432 Mr 12 '19
- Jerseys at home and abroad. A. L. Tichane. il Successful F 19:14-15+ D '20
- Jerseys at University of Illinois, 1920. W. W. Yapp. il Jersey B 39:3212 N 24 '20
- Jerseys at Wisconsin college of agriculture. W. A. Freehoff. il Jersey B 39:3327 D 8 '20
- Jerseys forty years in Jackson county. R. Yarnell. Jersey B 40:1979 Ag 10 '21
- Jerseys, go West, is a timely expression. S. Green. Jersey B 40:2561 O 12 '21
- Jerseys in China, dead and alive. W. E. Sallee. Jersey B 40:2335 S 21 '21
- Jerseys in Ohio. il Ohio F 144:8 Jl 5 '19
- Jerseys in the drier districts. J. S. McFadzean. il J Dept Ag Victoria 17:87-92 F '19
- Jerseys in the register of production. C. W. Turner. Jersey B 38:757 Ap 30 '19
- Jerseys in the South. C. H. Staples. Breeder's Gaz 75:1242 My 22 '19
- Jerseys in the South—an opportunity. C. P. Huntington. Jersey B 38:2285 N 12 '19
- Jerseys lead in bull clubs. A. L. Tichane. Jersey B 38:2414 N 26 '19
- Jerseys more popular in Canada—why? W. E. Ashton. Jersey B 40:1659-60 Jl 6 '21
- Jerseys of Southdown dairy. A. W. Van Pelt. Hoard's D 57:429 Mr 21 '19
- Jerseys of Washington co. C. T. Conklin. il Ohio F 146:8 Jl 3 '20
- Jerseys outrank all other tested breeds. Jersey B 38:2282, 2348, 2470, 2508, 2566, 2612-13 N 12-19, D 3-24 '19
- Jerseys will save farms and bring prosperity. W. W. Magruder. il Jersey B 40:2409 S 28 '21
- Joe, you're good advance agent. il Jersey B 39:1206 My 12 '20
- Keep in the middle of the road. D. B. Hogan. Jersey B 39:3174 N 17 '20
- Kelley island secures Jersey heifers. il Jersey B 40:1975 Ag 10 '21
- Learning to like the Jersey cow. G. M. Hatch. Jersey B 39:3452 D 22 '20
- Letter from the Island. B. A. Bull. Jersey B 38:964 My 28 '19
- Live wire Jersey community. T. F. Ritchey, jr. Jersey B 38:804 My 7 '19
- Mab's Rioter of Marion. O. Pickard. Jersey B 38:234 F 5 '19
- Majesty in the show ring. T. H. Wright. Jersey B 38:53 Ja 8 '19
- Majestys. J. V. Cotta. il Jersey B 38:1848 S 24 '19
- Majestys in the South. A. K. Heath. il Jersey B 38:711-12 Ap 23 '19
- Metal and matrix in a Majesty herd. A. L. Tichane. il Jersey B 40:1086 My 11 '21
- Mrs Hayes Sadler's Jersey herd. il Live Stock J 94:249 S 2 '21
- Mr Vincent Astor starts Jersey herd. il Jersey B 39:207 F 4 '20
- Mr Barton's comment. E. H. Barton. Jersey B 38:720 Ap 23 '19
- Mr J. Carson's Jersey sale. il Live Stock J 89:396-7 My 23 '19
- Mr Cooper buys The Cid. J. Carson. Jersey B 38:1602, 1881 Ag 27, S 24 '19
- Mr Darlington gives breed data. C. H. Darlington. Jersey B 39:2266 Ag 25 '20
- Mr DeWitt buys Browndale Jerseys. R. W. Hooper. Jersey B 38:2503 D 10 '19
- Mr E. C. Harlow is making some good records. W. R. Brown. il Jersey B 39:31 Ja 14 '20
- Mr Hoopes buys half interest in bull for \$13,000; Financial Satin Noble. Jersey B 38:2176 O 29 '19
- Mr Keeney gives some history. F. B. Keeney. Jersey B 39:3096 N 10 '20
- Mr King Pharr takes up Jerseys. il Jersey B 39:794 Ap 7 '20
- Mr Reynolds writes about his herd. Jersey B 40:470 Mr 2 '21
- Mr C. F. Sturhahn buys Maryvale herd. il Jersey B 38:2656 D 31 '19
- More Jersey cows needed. B. Masurorsky. Jersey B 38:1316 Jl 16 '19
- Need in Florida of better Jerseys. A. Van Eepol. Fla Ag Ext B 23:18-19 '20
- New Illinois champion Jersey. J. V. Cotta. Jersey B 38:1660 S 3 '19
- New Jersey a great state for Jersey cattle. A. L. Tichane. Jersey B 39:1682 Je 30 '20
- New Jersey center in Oregon. D. C. Howard. Jersey B 38:1087 Je 11 '19
- New Mexico Jersey record. il Kimball's D F 17:414 Ap 15 '19; Same. Hoard's D 57:770 My 2 '19
- New record for imported Jersey; Oxford's Wexford Spot. A. L. Tichane. il Jersey B 38:2397 N 26 '19
- New Secretary of agriculture; breeder of pure-bred Jersey cows. il Dairy F 18:140-1+ F 15 '20
- New star in Ohio. W. R. Spann. Jersey B 38:342 F 26 '19
- Nobles at Twin Oaks farm. Jersey B 40:80 Ja 12 '21
- Norsbury Jersey herd. Live Stock J 92:293 S 17 '20
- North Dakota college Jerseys. Jersey B 38:2453 D 3 '19
- Notable year for Jerseys. R. M. Gow. il Breeder's Gaz 76:1371 D 25 '19
- Now up to southern Jersey breeders. R. M. Gow. il Jersey B 39:2789 O 13 '20
- Observations in Oregon. H. Jenkins. Jersey B 38:2376+ N 19 '19
- Ohio grange master's Jerseys. H. Mason. il Ohio F 143:122 Ja 25 '19
- Ohio Jersey campaign a record breaker. R. D. Canan. Jersey B 40:894 Ap 20 '21
- Ohio's first state Jersey jubilee week. R. D. Canan. Jersey B 40:1909+ Ag 3 '21
- Old-time Jersey breeder. il Hoard's D 60:191 Ag 27 '20

**Jerseys—Continued**

Oregon bulls arrive safely in Maryland. Jersey B 40:355 F 16 '21  
 Oregon Jersey at 'em again. L. W. Wing, jr. il Jersey B 38:383 Mr 5 '19  
 Oregon Jersey jubilee. H. G. Van Pelt. il Jersey B 18:536-7 Je 1 '20  
 Oregon to observe great Jersey jubilee. D. B. Hogan. Jersey B 38:713 Ap 23 '19  
 Oregon's great third Jersey jubilee. H. Addis. Jersey B 40:1531-2 Je 22 '21  
 Owl-Interest Jersey club formed. J. R. Sibley. Hoard's D 58:721 N 7 '19  
 Owl-Interest Jersey club organized. Jersey B 38:1709 S 10 '19  
 Owl-Interest Jerseys in Ohio. W. E. Rinehart. il Jersey B 38:98 Ja 15 '19  
 Oxford You'll Do—a corner stone. T. S. Cooper. il Jersey B 38:1872-3 S 24 '19  
 Oxford You'll Do, famous bull, is dead. H. Jenkins. il Jersey B 40:1081+ My 11 '21  
 Oxford's Wexford Spot. M. H. Roberts. Jersey B 38:186 Ja 23 '19  
 Pearcelands Jersey cattle. Live Stock J 92:263 S 10 '20  
 Plan of a great Jersey establishment. D. B. Hogan. Jersey B 39:1680+ Je 30 '20  
 Prejudice against broken colors. B. W. Hunt. Jersey B 38:175 Ja 29 '19  
 Privileged to feel proud; Gedney farm imported Oxford Lad and discovered and developed Edmund Butler. H. Willets. Jersey B 38:2616 D 24 '19  
 Prize-winning Jersey cattle for Canada. J Ag (Quebec) 24:49 S '20  
 Production of high quality Jerseys. J. W. Ridgway. Jersey B 40:1977 Ag 10 '21  
 Pulling together for Jerseys; lesson taught by Wisconsin. W. A. Freehoff. Jersey B 38:756 Ap 30 '19  
 Pure bred sire campaign in Ohio. C. S. Plumb. Jersey B 40:1467 Je 15 '21  
 Railroad switch was thrown wide open. L. A. Higgins. il Jersey B 40:463 Mr 2 '21  
 Raising Jerseys in central Florida. R. McDonald. il Jersey B 38:565-6 Ap 2 '19  
 Raleighs. C. I. Hudson. il Jersey B 38:1862 S 14 '19  
 Recent Jersey movements in England. Jersey B 39:1557 Je 16 '20  
 Remarkable Jersey year. il Breeder's Gaz 77:1608 Je 10 '20  
 St Maves family. H. Addis. il Jersey B 38:1840+ S 24 '19  
 Sale promotion. A. L. Tichane. Jersey B 38:308 F 19 '19  
 Score card scale of points, some conclusions. J. W. Gowen. Jersey B 39:2101-2+ Ag 11 '20  
 Second Oregon Jersey jubilee. E. K. Hill. il Hoard's D 59:1200 My 28 '20  
 Seeing the Jerseys at home on the Island. E. T. Leavitt. il Jersey B 39:3429-30 D 22 '20  
 Situation in Canada. B. A. Bull. il Jersey B 38:431 Mr 12 '19  
 600 breeders now testing—an increase of 65% over November 1918. Jersey B 38:2518-19 D 10 '19  
 Skillful breeder of producing Jerseys. R. A. Sibley. il Jersey B 38:343 F 26 '19  
 Some Jersey aristocrats. L. E. Ortiz. il Field II 29:799-802 O '19  
 Some Jersey week reminders for you. R. M. Gow. Jersey B 40:1087 My 11 '21  
 Some lessons from actual experience. C. C. Dickson. Jersey B 39:266 F 11 '20  
 Some of the advantages of the Jersey cow. R. M. Washburn. Jersey B 39:898 Ap 14 '20  
 Sophie Tormentors. il Field II 29:342-3 My '19  
 Sophie Tormentor's. J. E. Dodge. il Jersey B 38:1857 S 24 '19  
 Southern breeder who looms large. il Jersey B 40:1603 Je 29 '21  
 Southern Jersey home. il Jersey B 38:5 Ja 1 '19  
 Starts with great animals. il Jersey B 39:399 F 25 '20  
 S. S. Michigan lands importation. A. L. Tichane. Jersey B 39:2114 Ag 11 '20  
 Stick to Jerseys; Oak Grove farm. W. A. Freehoff. il Jersey B 38:665 Ap 16 '19

Story of breeding of production. W. E. Ashton. il Jersey B 39:2651-7+ O 6 '20; Discussions. 39:3350+, 3381; 40:136, 177+ D 15 '20, Ja 19-26 '21  
 Story of cast off calf. Jersey B 38:1686 S 3 '19  
 Studies in milk secretion on the variations and correlations of butterfat percentage with age in Jersey cattle. J. W. Gowen. Maine Ag Exp B 284:291-6 '19  
 Success comes with Jerseys in Canada. il Jersey B 39:864 Ap 14 '20  
 Sultana's Virginia Lad 82703. B. W. Hunt. Jersey B 38:1728 S 10 '19  
 Sunday afternoon at Ayerdale. P. A. Pearson. Jersey B 39:1282 My 19 '20  
 Sunnyside an unorganized force. H. Jenkins. Jersey B 38:180 Ja 29 '19  
 Supplementary 50-lb. list. Jersey B 38:316, 494, 632, 814, 1096, 1282, 1670, 2066, 2352, 2456 F 19, Mr 19, Ap 9, My 7, Je 11, Jl 9, S 3, O 15, N 19, D 3 '19  
 Sybils sell well at the Sturhahn sale. Jersey B 40:1976+ Ag 10 '21  
 Tell us about Jersey cattle. J. G. Morse. Rural N Y 80:478 Mr 19 '21  
 10,000 cows on test campaign. O. H. Baker. Jersey B 38:2014 O 8 '19  
 Tennessee facing promising future. W. T. Magruder, jr. Jersey B 39:443 Mr 3 '20  
 Tennessee upsets some dope. Jersey B 38:1878 S 24 '19  
 Texas club makes another proposal. D. T. Simons. Jersey B 38:1453 Ag 6 '19  
 Texas Jerseys and Holsteins to compete. Jersey B 38:907 My 21 '19  
 3d annual Oregon Jersey jubilee. I. H. Loughary. Jersey B 40:1153 My 18 '21  
 3d week of Ohio Jersey campaign. R. D. Canan. Jersey B 40:1017 My 4 '21  
 This man is a model Oregon Jersey farmer. S. Fine. il Jersey B 39:1085 My 5 '20  
 Three bulls to Rutherford county. Jersey B 39:349 F 18 '20  
 To the Jersey breeders of America; 1923 Jersey futurity. C. O. Gould. Hoard's D 58:82 Ag 8 '19  
 Town that Jerseys built. A. L. Tichane. il Hoard's D 58:541 O 17 '19  
 Transmitting qualities of Jersey sires for milk yield butter-fat percentage and butter-fat. R. Pearl and others. Maine Ag Exp B 281:89-164 '19; Same (with appendix). Maine Ag Exp Rep 1919:89-204  
 Tribute to the queen. H. Addis. il Jersey B 38:1025-6 Je 4 '19  
 Trip through North Carolina. Mrs A. F. Howie. Jersey B 38:1181 Je 25 '19  
 Tris Speaker Jersey farm. M. Simmons. Jersey B 38:1458 Ag 6 '19  
 Twelfth gold medal bull has arrived. H. Addis. Jersey B 40:819 Ap 13 '21  
 Two more gold medal bulls arrive. H. Addis. Jersey B 40:889 Ap 20 '21  
 Type and production. W. R. Spann. Field II 29:333 My '19  
 Usefulness of state clubs. R. E. Hutchison. Jersey B 38:717+ Ap 23 '19  
 V.P.I. on Snowden Jerseys. Jersey B 39:3288 D 1 '20  
 Value of championship blood. C. C. Dickson. Jersey B 38:1109 Je 11 '19  
 Van Pelt starts another Jersey herd. L. J. Brosemer. il Jersey B 38:1499+ Ag 13 '19; Same. Dairy F 17:792+ Ag 15 '19  
 Variation of butter-fat percentage with age in Jersey cattle. J. W. Gowen. Maine Ag Exp B 290:133-44 '20  
 Very busy farm down in Alabam'. A. L. Tichane. il Jersey B 39:441 Mr 3 '20  
 Victoria of Fairview Farm 324039. R. L. Pike. Jersey B 38:918 My 21 '19  
 Visit to Greystone Jersey farm. R. A. Whitford. Jersey B 38:834 My 7 '19  
 Waikiki Jerseys. il Hoard's D 61:449 Ap 1 '21  
 Well begun—half won. S. Fine. Jersey B 38:1706 S 10 '19  
 What constitutes greatness in a dairy cow. J. M. W. Kitchen. Jersey B 40:856-7 Ap 13 '21  
 What there is at Waterloo farm. C. H. Staples. Jersey B 38:386 Mr 5 '19



## Jerseys—Continued

Where stands the Jersey? R. M. Gow. Jersey B 38:350 F 26 '19  
 Where the Jersey breed stands today. A. L. Tichane. Hoard's D 57:428 Mr 21 '19  
 Which is the leading Jersey state. R. M. Gow. Jersey B 40:1319 Je 1 '21  
 Whinn farm transactions. Jersey B 38:936 My 21 '19  
 Why do we import Jerseys. A. L. Tichane. il Field II 31:354-6 My '21  
 With high Jersey producers. Ohio F 147:479 Ap 2 '21  
 Woman and the Jersey. N. Knopf. il Jersey B 38:669 Ap 16 '19  
 Woman's tribute to the Jersey cow. Mrs M. A. Covode. il Jersey B 39:439 Mr 3 '20  
 Word about the Raleighs. il Field II 30:411-14 My '20  
 World's champion grade a Jersey. O. Erf. il Jersey B 38:1229 Jl 2 '19  
 World's champion Jerseys. C. L. Martens. Jersey B 38:2358 N 19 '19; Same abr. Hoard's D 58:979 D 12 '19  
 Year in Jersey history. A. L. Tichane. il Dairy F 18:885 N 1 '20  
 You can't build without an idea. E. R. Shoemaker. Jersey B 38:2532 D 10 '19

See also names of breeders' associations, e.g. American Jersey cattle club, British Columbia Jersey breeders' association, Canadian Jersey cattle club, Eastern Pennsylvania Jersey cattle club, Franklin county (Pa.) Jersey cattle club, Illinois Jersey cattle club, Indiana Jersey cattle club, Michigan Jersey cattle club, Ohio Jersey cattle club, Oregon Jersey cattle club; Payette Valley, Idaho, Jersey bull association; Pennyroyal dairy cattle improvement association; Southwest Jersey cattle breeders' association, Vermont Jersey cattle club, Virginia Jersey cattle club

## Exhibits

A. J. C. club in regard to fairs. R. M. Gow. il Jersey B 39:321-2 F 18 '20  
 Annual bull show on the Island. Jersey B 38:857 My 14 '19  
 Annual summer show on Island of Jersey. E. Le Brocq. il Jersey B 39:2660-1+ O 6 '20  
 At the Western fair, London, Ont. W. E. Ashton. Jersey B 40:147 Ja 19 '21  
 British Columbia's good Jersey show. W. E. Ashton. Jersey B 40:2708 O 26 '21  
 Canadian national exhibition. Jersey B 38:1707 S 10 '19  
 Chehalis' great show of Jersey cattle. H. Addis. Jersey B 40:2225 S 7 '21  
 County exhibits saved Oregon Jerseymen. Jersey B 39:2936 O 27 '20  
 Dairy cattle congress Jersey exhibit. Jersey B 40:2510-11 O 5 '21  
 Dairy industry's big exposition; Jerseys. Breeder's Gaz 78:828 O 21 '20  
 East Tennessee stages great Jersey show. il Jersey B 40:2639 O 19 '21  
 Eastern states exposition big event. H. F. Holcomb. il Jersey B 38:1936-7+ O 1 '19  
 Eastern states exposition ranks high. W. MacMonnies. il Jersey B 40:2503+ O 5 '21  
 1st exhibition of the Inter-mountain fair, Grand Junction, Colo., Sept. 30-Oct. 3. Jersey B 38:2193 O 29 '19  
 First Jersey bull show. I. D. Globe. Hoard's D 62:200 S 9 '21  
 Grand champion females at National dairy shows; photographs. Jersey B 38:1820 S 24 '19  
 Grand champion males at National dairy shows; photographs. Jersey B 38:1821 S 24 '19  
 Great Los Angeles live stock show. Mrs F. M. West. Jersey B 39:3267 D 1 '20  
 Great Mississippi-Alabama fair. J. R. Moore. il Jersey B 39:3204 N 24 '20  
 Great Ravalli county, Mont., fair. il Jersey B 39:3147+ N 17 '20  
 Hartford show was a wonderful event. W. MacMonnies. Jersey B 39:2589 S 29 '20  
 High-class Jersey show at Victoria. B. C. B. A. Bull. Jersey B 39:2810 O 13 '20  
 How the Island judges are selected. B. A. Bull. Jersey B 38:1273 Jl 9 '19

Illinois awakening shown at state fair. Jersey B 40:2163 Ag 31 '21  
 Illinois stages great Jersey show. il Jersey B 38:1593 Ag 27 '19  
 Indiana breeders break some records. Jersey B 40:2279+ S 14 '21  
 Indiana fair Jersey exhibits rank high. Jersey B 38:1705-6 S 10 '19  
 Iowa Jersey breeders out in full force. J. P. Eves. Jersey B 40:2278 S 14 '21  
 Island Jersey show. il Field II 29:567 Jl '19  
 Island of Jersey summer show. Jersey B 40:2444 S 28 '21  
 Island show the best in many years. E. Le Brocq. Jersey B 38:1133-4+ Je 18 '19  
 Jersey aristocrats at New York state fair. O. H. Baker. Jersey B 39:2581 S 29 '20  
 Jersey demonstration at St Paul. W. MacMonnies. il Jersey B 40:2690-1 O 26 '21  
 Jersey is visited by King George V. who inspects Jerseys and is presented with one, La Sente's Miss Bronzemme; Royal party highly pleased. il Jersey B 40:2408 S 28 '21  
 Jersey show at Syracuse. A. L. Tichane. Jersey B 38:1819 S 24 '19  
 Jersey show at the Iowa state fair. G. H. Conn. Jersey B 39:2440 S 15 '20  
 Jersey show at the 1920 Utah state fair. Jersey B 39:3205 N 24 '20  
 Jerseys at California state fair. G. H. Miller. Jersey B 38:2068 O 15 '19  
 Jerseys at Canada's great eastern exhibition. W. E. Ashton. Jersey B 40:2502 O 5 '21  
 Jerseys at Central Canada fair. W. E. Ashton. Jersey B 39:2824 O 13 '20  
 Jerseys at Florida state fair. S. N. Warren. il Jersey B 38:2609 D 24 '19  
 Jerseys at Great London dairy show. T. Reece. Jersey B 38:2347 N 19 '19  
 Jerseys at Kansas free fair. R. Yarnell. Jersey B 38:2032 O 8 '19  
 Jerseys at Memphis. Jersey B 38:2078 O 15 '19  
 Jerseys at Minnesota state fair. il Jersey B 39:2582 S 29 '20  
 Jerseys at Missouri state fair. A. C. Ragsdale. Jersey B 38:1594 Ag 27 '19  
 Jerseys at Missouri's birthday celebration. F. W. Atkeson. Jersey B 40:2164+ Ag 31 '21  
 Jerseys at Oklahoma state fair. Jersey B 39:2038 N 3 '20  
 Jerseys at San Francisco. Jersey B 38:2404 N 26 '19  
 Jerseys at Spokane fair. Jersey B 38:1944 O 1 '19  
 Jerseys at the British royal show. T. Reece. Jersey B 38:1365 Jl 23 '19  
 Jerseys at the British royal show. T. Reece. Jersey B 39:2122 Ag 11 '20  
 Jerseys at the British Royal show, 1921. Jersey B 40:1911 Ag 3 '21  
 Jerseys at the Canadian national, Toronto. il Jersey B 39:2579-80 S 29 '20  
 Jerseys at the Idaho state fair. F. R. Cammack. Jersey B 38:2527 D 10 '19  
 Jerseys at the Illinois state fair last week. Jersey B 39:2301 S 1 '20  
 Jerseys at the Indiana state fair last week. Jersey B 39:2448 S 15 '20  
 Jerseys at the Oregon county fairs. H. Ad-dis. Jersey B 40:2574, 2632 O 12-19 '21  
 Jerseys at the Wisconsin state fair. W. A. Freehoff. il Jersey B 38:1769 S 17 '19  
 Jerseys at the Sherbrooke, Canada, fair. W. E. Ashton. Jersey B 39:2583 S 29 '20  
 Jerseys at the Wisconsin state fair. W. A. Freehoff. Jersey B 39:2384 S 8 '20  
 Jerseys at the Wisconsin state fair. W. A. Freehoff. Jersey B 40:2221 S 7 '21  
 Jerseys at Vancouver exposition. H. Dorling. Jersey B 38:2122 O 22 '19  
 Jerseys at Vermont state fair. G. D. Hopkins. Jersey B 38:2090 O 15 '19  
 Jerseys at Washington state. Jersey B 38:2008 O 8 '19  
 Jerseys exhibited at the Virginia state fair. F. C. Baldwin. Jersey B 39:2862 O 20 '20  
 Jerseys feature at Pacific international. Jersey B 38:2452 D 3 '19  
 Jerseys make good showing at Trenton. Jersey B 38:2116 O 22 '19  
 Jerseys outnumbered rivals at Yakima. G. N. Angell. Jersey B 39:2869 O 20 '20

**Jerseys—Exhibits—Continued**

Jerseys scored heavily at the Syracuse fair. W. MacMonnies. Jersey B 40:2426-7 S 28 '21

Jerseys triumph at National dairy show, Minnesota. W. MacMonnies. il Jersey B 40:2627-31+ O 19 '21

Kansas free fair's Jersey show. R. Raynell. Jersey B 40:2440 S 28 '21

Kentucky state fair. il Jersey B 38:1765-6 S 17 '19

Kentucky's ranking upheld at state fair. Jersey B 40:2339 S 21 '21

Minnesota breeders out in force at fair. Jersey B 40:2338 S 21 '21

Missouri Jerseys show well in tests. C. W. Turner. Jersey B 38:2225 N 5 '19

Missouri's greatest Jersey show in history. F. W. Atkeson. Jersey B 39:2372 S 8 '20

Nebraska improves its fair record. Jersey B 39:2602 S 29 '20

Ohio Jersey breeders put up corking show. il Jersey B 40:2219+ S 7 '21

Ohio Jerseys strong at the fair. Jersey B 38:1645-6 S 3 '19

Ohio's gold medal Jersey cows. L. L. Rummell. il Ohio F 144:194 Ag 23 '19

Oregon state fair report. E. A. Rhoten. Jersey B 38:2246 N 5 '19

Ozark breeders at the Springfield show. F. W. Atkeson. il Jersey B 39:3154 N 17 '20

Piedmont breeders stage great bull show. H. S. Johnson. il Jersey B 39:3138 N 17 '20

Portland show tops all Jersey events. H. Addis. il Jersey B 39:3323-5+ D 8 '20

Real quality Jerseys at the Ohio state fair. il Jersey B 39:2373 S 8 '20

Review of the Jerseys in the show ring. W. MacMonnies. il Jersey B 39:2670-1 O 6 '20

Robinson, Illinois. Jersey bull show. R. D. Canan. il Jersey B 40:2050 Ag 17 '21

Rutherford's great 1921 county fair. H. B. Stephenson. Jersey B 40:2573 O 12 '21

So. California's fair at Riverside. Mrs F. M. West. Jersey B 39:3216 N 24 '20

South Carolina Jersey bull show. A. B. Bryan. Breeder's Gaz 78:1071 N 18 '20

Tennessee breeders cap all state fairs. Jersey B 40:2411+ S 28 '21

Tennessee put on wonderful Jersey exhibit. J. Morris. Jersey B 39:2732-3 O 6 '20

Texas breeders staged wonderful show. Jersey B 39:3155 N 17 '20

Timonium (Maryland) show throws on high speed. W. MacMonnies. il Jersey B 40:2341+ S 21 '21

Topeka fair had the Jerseys out this year. R. Yarnell. Jersey B 39:2666 O 6 '20

Town or All Island spring show. B. A. Bull. il Jersey B 40:1465+ Je 15 '21

Two hundred in Texas Jersey show. Mrs J. R. Green. Jersey B 38:2170 O 29 '19

Virginia state fair's good Jersey show. Jersey B 40:2693 O 26 '21

Watch Christian county grow. E. M. Prewitt. Jersey B 39:3207 N 24 '20

Waterloo has classy show. il Jersey B 38:1933-5 O 1 '19

Western Ontario fair Jersey show. il Jersey B 40:2563 O 12 '21

Whitcom county's wonderful exhibit. G. N. Angell. Jersey B 39:2943 O 27 '20

Why the national Jersey show South? R. M. Gow. il Jersey B 39:440 Mr 3 '20

Wonderful Canadian national exhibition. il Jersey B 40:2337+ S 21 '21

See also National Jersey cattle show

**Field representatives**

Field work outlined by active fieldman. Jersey B 40:641 Mr 23 '21

Fieldman for three states is appointed. Jersey B 40:289 F 9 '21

Louisiana state breeders employ fieldman. Jersey B 40:638 Mr 23 '21

Shall we have field work for the Jersey? R. M. Gow. Jersey B 39:1907 Jl 21 '20

**History**

Background and foreground of a dairy breed. M. D. Munn. il Breeder's Gaz 75:271 F 6 '19

History of famous Jersey families. W. MacMonnies and O. H. Baker. il Jersey B 40:753-5, 1075-8, 1534-6+, 1779-80, 2035-7, 2687-9 Ap 6, My 11, Je 22, Jl 20, Ag 17, D 26 '21

Interesting history. Jersey B 38:2584 D 17 '19

Mr Carlyon gives some great history. E. F. G. Carlyon. Jersey B 40:1203 My 18 '21

Origin of the Jersey breed. W. E. Ashton. il J Ag (Quebec) 23:264 Je '20

Story of the breeding of production. il Jersey B 39:2651-7+ O 6 '20

**Milk records**

Advance of breeding shown by records. Jersey B 40:693 Mr 30 '21; Same. Cal Cultivator 56:654 My 14 '21

A. J. C. club medal awards, year 1919. Jersey B 39:1908, 1916-18 Jl 21 '20

Analysis of a good Jersey heifer's record. Jersey B 39:892 Ap 14 '20

Another Jersey breaks world's record; Poppy's Dortha. il Hoard's D 60:114 Ag 13 '20

Another Ohio class champion. Jersey B 40:590 Mr 16 '21

Beauty Maid of Woodstock. R. G. Swigart. Jersey B 38:364 F 26 '19

Best daughters of twelve sires. Jersey B 38:194 Ja 29 '19

Best five Jersey year's records in each of eight classes. Jersey B 37:2116; 38:314, 684, 916, 1194, 1380, 2010, 2126, 2528, 2630; 39:166, 733, 1214, 1292, 1656, 3102, 3172; 40:370, 530, 1504, 1882, 2248 D 18 '18, F 19, Ap 16, My 21, Je 25, Jl 23, O 8, 22, D 10, 24 '19, Ja 28, Mr 31, Je 23, N 10, 17 '20, F 16, Mr 9, My 18-25, Je 15, Jl 27, S 28 '21

Blackburn cow breaks Ohio record. il Jersey B 40:235 F 2 '21

Breeding shown by Jersey records. Hoard's D 61:548 Ap 15 '21

Canadian Jersey makes world record. W. E. Ashton. Jersey B 40:1478 Je 15 '21

Concerning the 600-lb. list. C. T. Conklin. Jersey B 38:1136 Je 18 '19

Conformation and its relation to the milk producing capacity in Jersey cattle. J. W. Gowen. bibliog J Dairy Sci 3:1-32; 4:359-74 Ja '20, S '21; Same cond. Maine Ag Exp B 234:298-300 '19; Abstract. Maine Ag Exp Doc 538:1-12 '20

Correlation between the butter-fat percentage of one lactation and succeeding lactations in Jersey cattle. J. W. Gowen. Maine Ag Exp B 291:145-56 '20

Cow that improved with age. il Prac F 116:214 Jl 1 '20; Same. Hoard's D 59:1439 Jl 2 '20

Eleven-year-old world's record broken. C. W. Turner. Jersey B 39:105 Ja 21 '20

Eleventh gold medal bull arrives. H. Addis. il Jersey B 40:175-6 Ja 26 '21

Example of successful line-breeding; Sophie Tormentor Jerseys. il Hoard's D 59:680 Ap 2 '20

Five remarkable year's Jersey records. il Prac F 116:354 D 1 '20

Four champion Jerseys again on test. Jersey B 40:636 Mr 23 '21

Gedney Farm Girl's Oxford 75998. Jersey B 40:1259 My 25 '21

Great cows of Oregon. B. B. Hogan. Jersey B 38:1027 Je 4 '19

Highest yields of Jerseys. Jersey B 39:336 F 25 '20

Highest yields of Jerseys. Jersey B 40:526+ Mr 9 '21

Hugo's Girlie a gold medal cow. M. L. Howell. Jersey B 40:1043 My 4 '21

Illustrious Jersey bull. J. E. Dodge. Breeders' Gaz 77:72 Ja 8 '20

Imported Jersey champion proves her value; Oxford's Wexford Spot. il Hoard's D 58:1125 Ja 2 '20

Island of Jersey 1919 milk record awards. Jersey B 39:2172 Ag 18 '20

Jap's Milla Garfield a great cow. Jersey B 38:2360 N 19 '19

Jersey breaks record by nearly 100 pounds. A. L. Tichane. il Hoard's D 57:322 Mr 7 '19

Jersey champion; Sultan's Daisy. W. M. Singleton. il J Ag New Zealand 19:281-3 N '19



## Jerseys—Milk records—Continued

Jersey cow that improved with age. A. L. Tichane. Jersey B 39:1084 My 5 '20  
 Jersey in all her glory; Lulu Alpha of Ashburn 375710. S. Fine. il Jersey B 38:2553-5 D 17 '19  
 Jersey (island) milk records awards. Live Stock J 93:11 Ja 7 '21  
 Jersey persistency of production. Jersey B 40:422 F 23 '21  
 Jersey record broken. R. M. Gow. Kimball's D F 17:225 Mr 1 '19  
 Jersey records, February 24th to March 31st. Ag J of British Columbia 6:84 My '21  
 Jersey yearling produces 800 lbs. butterfat. il Hoard's D 58:1116 Ja 2 '20  
 Jerseys best butter cows for Canada. W. E. Ashton. il Jersey B 40:231 F 2 '21  
 Jerseys lead in Iowa tests. F. L. Clark. il Jersey B 39:379-80 F 25 '20  
 Jerseys lead Indiana 300-lb. cow club. R. D. Canan. Jersey B 38:614 Ap 9 '19  
 Jerseys make (La.) state records. C. H. Staples. Jersey B 38:1146 Je 13 '19  
 Jerseys outrank all other tested breeds. Jersey B 38:2282, 2348, 2470, 2508, 2566, 2612-13 N 12-19, D 3-24 '19  
 Jerseys with records of 50 lbs. of butter fat in the month. Jersey B 38:8, 258, 342+, 568+, 806+, 1042+, 1274+, 1548+, 1596+, 1996+, 2226+, 2284, 2402-3+, 2256+, 39:12-13+, 382-3+, 648-50, 1019-20+, 1162-3+, 1552-3+, 1810, 2038-9+, 2790-1, 3000-1+, 3072-3+, 3432-3+, 40:66-7+, 178-9+, 406-7+, 824-5+, 952-3, 1322-3+, 1782-3+, 1912-13+, 2100-1+, 2564-5+ Ja 1, F 12, 26, Ap 2, My 7, Jl 9, Ag 20-27, O 8, N 5-12, 26, D 17 '19, Ja 7, F 25, Mr 24, Ap 28, My 12, Je 16, Jl 14, Ag 4, O 13, N 3, 10, D 22 '20, Ja 12, 26, F 23, Ap 13, 27, Je 1, Jl 20, Ag 3, 24, O 12 '21  
 Latest news of Spermfield Owl. J. R. Sibley. Jersey B 39:404 F 25 '20  
 Long live Sadie Heath, wonderful cow. W. H. Oliver. Jersey B 40:348 F 16 '21  
 Lucky Farce new Ohio champion. il Jersey B 39:2609 S 29 '20  
 Maine Jersey makes world's record. il Cal Cultivator 54:501 Mr 20 '20; Same. Hoard's D 59:634 Mr 26 '20; Same. Ohio F 145:562 Mr 27 '20  
 Majesty's Iris proclaimed queen of Majestys. O. H. Baker. il Jersey B 39:211 F 4 '20  
 Makes new world Jersey record. il O Judd Farmer 68:652 Mr 27 '20  
 Marshall county makes R. of M. records. H. B. Stephenson. il Jersey B 40:519 Mr 9 '21  
 Medal award list a record breaker. Jersey B 38:1135+ Je 18 '19  
 Milestone in Jersey history. W. MacMonnies. Jersey B 40:1986 Ag 10 '21  
 Milk records of a Jersey herd. Live Stock J 93:394 Ap 22 '21  
 Missouri has to be convinced by figures. C. W. Turner. Jersey B 39:2519-20 S 22 '20  
 Missouri home of the Financial family. C. W. Turner. il Jersey B 39:61 Ja 14 '20  
 Missouri Jersey record broken. Jersey B 39:3274 D 1 '20  
 More about Sophie's Agnes. J. E. Dodge. il Jersey B 37:2147 D 25 '18  
 New gold medal champion. M. L. Howell. Ohio F 147:624 My 7 '21  
 New Jersey test rules. Dairy F 18:73 Ja 15 '20  
 New record for Island Jerseys; Oxford's Wexford Spot 289464. H. G. Gulliver. il Field 11 29:992 D '19  
 1920 medal awards. Jersey B 40:1560-1 Je 22 '21  
 1920 prize winners in the four classes of R. of P. Jersey B 40:822 Ap 13 '21  
 North Dakota's champion herd. Jersey B 40:721 Mr 30 '21  
 Notable Jersey family; Lass 47th of Hood farm and her three daughters, a study in line breeding. il Field 11 29:993 D '19  
 Official figures for Vive La France. Jersey B 38:758 Ap 30 '19  
 Ohio cow makes milk record for age. H. Jenkins. il Jersey B 38:2281+ N 12 '19  
 Ohio Jersey breaks record—proves a point. il Jersey B 39:1012 Ap 28 '20; Same abr. Hoard's D 59:1059 My 14 '20  
 Ohio Jersey makes milk record for age. il Hoard's D 58:1248 Ja 16 '20

Oregon boosts world's yearling record. H. Addis. Jersey B 40:2215-16 S 7 '21  
 Oregon has another 900-lb. cow; Rochette's Bonnie. il Jersey B 38:972 My 28 '19  
 Oregon's 1,000-lb. Jerseys. H. Addis. il Jersey B 38:9 Ja 1 '19  
 Owl-interest family. J. R. Sibley. Jersey B 38:1826 S 24 '19  
 Oxiord Majesty dead from old age. J. V. Cotta. Jersey B 40:893 Ap 20 '21  
 Persistency in Jersey records. J. E. Dodge. Breeder's Gaz 74:536 O 3 '18  
 Plain Mary bidding for queen's crown. F. A. Doerfler. il Jersey B 38:2113 O 22 '19  
 Plain Mary—new world's champion Jersey. A. L. Tichane. il Jersey B 39:444-5 Mr 3 '20  
 Plain Mary 268206. W. J. Websler. Jersey B 39:582 Mr 17 '20  
 Plain Mary—world's champion Jersey. O. H. Baker. il Dairy F 18:264 Mr 15 '20  
 Poppy's Dortha establishes world record. H. Addis. Jersey B 39:1741 Jl 7 '20  
 Present class champions to May 1, 1921. Jersey B 40:1556-8 Je 22 '21  
 Pride of L'Etacq again Minnesota champion. il Jersey B 38:2557 D 17 '19  
 Purdue cow establishes enviable record. L. H. Fairchild. il Purdue Ag 15:311-12 Ap '21  
 Purdue's Golden Estelle's Indiana record. il Jersey B 40:413-15 F 23 '21  
 Quechee Fells farms' new champion. il Jersey B 39:1167 My 12 '20  
 Quechee Fells, new world's champion. A. L. Tichane. il Jersey B 39:1330-1 My 26 '20  
 Queen of the Jerseys. S. R. Guard. il Breeder's Gaz 75:59 Ja 9 '19  
 Record cows of Jersey. J. Ashton. Breeder's Gaz 76:136 Jl 24 '19  
 Record of Hood Farm, Torono. Jersey B 39:116 Ja 21 '20  
 R. of M. facts on milk production. Jersey B 40:2124 Ag 24 '21  
 R. of M. class leaders and state champions. Jersey B 38:1648, 1708; 39:2179-81 S 3-10 '19, Ag 18 '20  
 Register of merit state leaders for the month of October 1920. Jersey B 40:136 Ja 19 '21  
 Register of merit tests. See weekly numbers of Jersey bulletin and dairy world  
 Remarkably persistent Jersey cow. Jersey B 39:3139 N 17 '20  
 Rochette's Princess finishes great test. il Jersey B 38:433 Mr 12 '19  
 St Mawes Beauty persistent producer and re-producer. Jersey B 40:37 Ja 5 '21  
 Silky H. has eight qualified daughters. H. H. Addis. il Jersey B 39:1011 Ap 28 '20  
 Some Jersey convictions. J. R. Sibley. Breeder's Gaz 75:1178 My 15 '19  
 Sophie 14th a remarkable cow. Jersey B 40:20 Ja 5 '21  
 Sophie's Agnes new world's champion. Jersey B 37:2105+ D 13 '18  
 Sophie's Agnes—world's champion Jersey. A. L. Tichane. il Kimball's D F 17:3 Ja 1 '19; Same. Hoard's D 56:784 D 27 '18; Same abr. O Judd Farmer 66:49 Ja 11 '19  
 Sophie's Carrie, Texas champion. Jersey B 39:1860 Jl 14 '20  
 South, East, West, prove Jersey adaptability. il Jersey B 40:291 F 9 '21  
 State test leaders from the November 1920, 50-lb list. Jersey B 40:232 F 2 '21  
 State test leaders for December 1920, 50-lb list. Jersey B 40:470 Mr 2 '21  
 State test leaders from the January 1921, 50-lb list. Jersey B 40:840 Ap 13 '21  
 State test leaders from the February 1921, 50-lb list. Jersey B 40:964 Ap 27 '21  
 Supplementary 50-lb. list. Jersey B 39:112, 448, 824 Ja 21, Mr 3, Ap 7 '20  
 Tennessee lays up some strong claims. C. E. Wylie. Jersey B 39:2303 S 1 '20  
 Test leaders for the month of June 1920, from the register of merit records. Jersey B 39:2946 O 27 '20  
 Test leaders for the month of July 1920, from the register of merit records. Jersey B 39:3101 N 10 '20  
 Testing of purebred dairy cows. W. M. Singleton. il J Ag New Zealand 21:195-9 O '20

**Jerseys—Milk records—Continued**

That bovine celebrity, Mrs O'Grady; discussion. Nat Stock & F 43:1176, 1216, 1294 Ja 3-10, 24 '20; Dairy F 18:199, 319, 384-5+, 426, 449, 489, 495, 626, 645, 699, 744, 774, 836 Mr 1, Ap 1-My 15, Jl 1-15, Ag 15-O 1 '20; Hoard's D 59:265, 400 F 20, Mr 5 '20; Ohio F 145:650 Ag 10 '20; Country Gent 85:56 My 8 '20; Jersey B 18:542-3 Je 1 '20

They were three great English herds; Tring park, Stowell park and West Thorney herds. H. Corner. Jersey B 39:787 Ap 7 '20

Trio of great Jersey cows in N.Y. Jersey B 39:3152 N 17 '20

Two aged cows that are making history. il Jersey B 39:1399 Je 2 '20

Valentine's Ashburn Baronet wins medal. il Jersey B 39:2860-1+ O 20 '20

Virginia Jersey makes splendid record. il Jersey B 40:203 Ja 26 '21

Vive la France finishes another test. H. Ad-dis. Jersey B 40:2159 Ag 31 '21

Vive la France: real world beater. Jersey B 39:2033-4 Ag 4 '20

Vive la France sets high mark for persistency. il Hoard's D 60:235 S 3 '20

Vive la France—the new queen. Jersey B 38:519 Mr 26 '19

Vive la France 319616. il Kimball's D F 17:520 My 15 '19; Excerpt. Prac F 115:214 Je 1 '19

Way Mr Barton started. E. H. Barton. Jersey B 39:1034 Ap 28 '20

Windsor co. (Vt.) and its Jerseys. V. A. Fogg. Jersey B 39:580 Mr 17 '20

Wisconsin Jersey record broken; University Kenna Climax no. 306657. R. S. Hulce. il Hoard's D 60:109 Ag 13 '20

World's record for Sadie of Hillcrest. Farmer's Advocate 56:966 Je 9 '21

**Pedigree records**

Arthur's Golden Fox 61429. Jersey B 38:436 Mr 12 '19

Birdie La France was great cow. D. B. Hogan. Jersey B 40:1740 Jl 13 '21

Brookhouse herd of Raleighs in England. E. T. Leavitt. il Jersey B 39:3487 D 29 '20

15 years of Royal Majesty. H. Jenkins. il Field II 29:346-7+ My '19

For the information of Mr Herb Sharp. Washington. A. M. Bowman, Jr. Jersey B 39:684 Mr 24 '20

Fountainhead of Colorado. H. Jenkins. Jersey B 38:672 Ap 16 '19

Gamboge's Knight. W. L. Fry. il Jersey B 38:1882-3 S 24 '19

Golden Fern's Noble. W. R. Proctor. il Jersey B 38:1834-5 S 24 '19

Golden Glow's Chief—gold medal bull. D. B. Hogan. Jersey B 38:52 Ja 8 '19

Golden Glow's Chief notes. D. Brooks. Jersey B 39:70 Ja 14 '20

How the new champion is bred; Plain Mary 258206. Jersey B 39:447 Mr 3 '20

Human interest. L. J. Brosemer. Dairy F 18:951 D 1 '20

Imp. Fern's Oxford Noble brings big price. il Jersey B 39:2863 O 20 '20

Imported Golden Fern's Noble is dead. W. R. Proctor. il Jersey B 40:575 Mr 16 '21

Little more interesting St Mawes history. C. Gates. Jersey B 39:1618 Je 23 '20

Looking backward, or not at all? H. E. Sharp. Jersey B 39:1630 Je 23 '20

Mr Doerfler leases bull. F. A. Doerfler. il Jersey B 38:940 My 21 '19

Mr Sibley's famous pedigree of Moses. J. C. Sibley. Jersey B 39:2175 Ag 18 '20

Mr Williams selects a Jap bull. Jersey B 39:742 Mr 31 '20

New Jersey champion appears at Longview. Jersey B 39:1679 Je 30 '20

Nobles in name and in fact. W. R. Proctor. il Field II 29:339-41 My '19

Oregon's third gold medal bull. il Jersey B 39:325 F 18 '20

Owl Interest family. J. R. Sibley. il Field II 30:23-7 Ja '20

Oxford Lad's progress. J. A. Driscoll. il Jersey B 39:530 Mr 10 '20

Pedigree of champion Flying Fox 61441. Jersey B 40:2045 Ag 17 '21

Pedigree of combination of St Saviour's 88245. Jersey B 40:764 Ap 6 '21

Pedigree of Eminent 69631. Jersey B 40:1079 My 11 '21

Pedigree of Fauvic's Prince 107961. Jersey B 40:1784 Jl 20 '21

Pedigree of Financial King 57788. Jersey B 40:1545 Je 22 '21

Pedigree of imported Golden Fern's Noble 155762. Jersey B 40:2697 O 26 '21

Pedigree records. Jersey B 39:1828-56 Jl 14 '20

Pennsylvania bull goes to Jamaica. H. Jenkins. Jersey B 39:2539 S 22 '20

Review of the great 1919 handicap. C. S. Middleton. Jersey B 39:1743 Jl 7 '20

Selecting Jersey sires for high yearly production. R. E. Hunt. Va Ag Ext B 65:1-18 '21

Status of the St Lambert family. H. Jenkins. Jersey B 38:1902+ S 24 '19

Sybil's Gamboge Jerseys. il Field II 30:1095-7 D '20

Vive la France 319616. Jersey B 38:520 Mr 26 '19

**Price lists**

Allen Dale farms' sale was a wonder. il Jersey B 39:1133+ My 26 '20

Another great Jersey sale; C. F. Sturhahn's sale. Dairy F 17:827 S 1 '19

Auction sales reported for 1919. Jersey B 38:2659 D 31 '19

Ayer & McKinney sale brilliant success. Jersey B 39:2513+ S 22 '20

Ayer's sale hits good big average. Jersey B 39:2105 Ag 11 '20

Ballou Jerseys bring good prices. Jersey B 38:668 Ap 16 '19; Field II 29:359 My '19

Bell sale rings true. T. Dempsey. Jersey B 38:1190 Je 25 '19

Belmont county's great Jersey meetings. R. D. Canan. il Jersey B 40:1184 My 11 '21

Bon Aire sale establishes record for Southeast. Jersey B 39:1407-8 Je 2 '20

Brewer sale brings some good figures. G. N. Angell. il Jersey B 39:942 Ap 21 '20

Brookwood enjoys wonderful sale. il Jersey B 40:1081+ My 11 '21

Butler breaks record for all breeds. il Jersey B 38:1495-7+ Ag 13 '19

Butler Jersey sale. R. V. Hoffman. il Field II 29:726-7+ S '19

Butler sale makes world's Jersey record. il Jersey B 39:1476-7 Je 9 '20

Butler's Jerseys jump prices. H. G. Van Pelt. il Dairy F 17:826-7 S 1 '19

Carson sale in England. Jersey B 38:2174 O 29 '19

Cary sale breaks records. Field II 29:648 Ag '19

Clifford Reid sale. T. Withycombe. Jersey B 38:1150 Je 18 '19

Club sale at Birmingham. Jersey B 39:1622 Je 23 '20

Corbett farm sale had good average. Jersey B 39:2392 S 8 '20

Cullings & Flanegin sale. Jersey B 38:2134 O 22 '19

Dairy show sale. Jersey B 38:2056 O 15 '19; Field II 29:934 N '19

Dan McCarty's Jerseys bring nice figures. Jersey B 39:1169 My 12 '20

Did you ever see a cow race. E. G. Bennett. Jersey B 39:2548 S 22 '20

Dieter and Ft Worth sales. Jersey B 38:617 Ap 9 '19

Dorrance sale runs up some good prices. Jersey B 38:140 Ja 22 '19

Eby & Moore's Jerseys sell for \$10,450. Jersey B 38:1190 Je 25 '19

Ellerslie farm sale hit a good average. il Jersey B 39:943 Ap 21 '20

Epochal week for Jerseys. H. G. Van Pelt. Dairy F 18:574+ Je 15 '20

Excellent sale at Bellevue. Jersey B 38:1089 Je 11 '19

Fairview farm sale marks Georgia up. Jersey B 39:721 Mr 31 '20

Fansher sale's good average. Jersey B 38:2472 D 3 '19

Fariss-Ballanfant sale prices fair. Jersey B 39:2253 Ag 25 '20

1st big show of the 1920 season. Jersey B 39:646 Mr 24 '20



**Jerseys—Price lists—Continued**

- 48 Jerseys bring \$158,500. Dairy F 17:806 Ag 15 '19  
 Good sale of Busch farm Jerseys. Jersey B 39:2186 Ag 18 '20  
 Gray & Liggett sale averaged \$190.29. Jersey B 39:2450 S 15 '20  
 Great Georgia sale and state meeting. Jersey B 39:1814 JI 14 '20  
 Great sale of Jerseys at North Portland show. Jersey B 39:3354 D 8 '20  
 Great Texas Jersey club sale. Jersey B 38:617 Ap 9 '19  
 Here's a big thing that Idaho did. il Jersey B 39:1332 My 26 '20  
 Highest selling animals in auction sales having a top price of \$500 or more. Jersey B 37:2149 D 25 '18  
 Highest selling animals in 1919 auctions having a top price of \$500 or more. Jersey B 38:2659 D 31 '19  
 Holcomb's Jersey sale in Nebraska. Jersey B 39:3220 N 24 '20  
 Hood farm's great sale of Sophie Tormentors. il Jersey B 39:1482-3 Je 9 '20  
 Hoopes sale. Jersey B 38:2466 D 3 '19  
 It pays to test; Alfa-Meade farm sale. Jersey B 38:1060 Je 4 '19  
 Jersey meeting and sales. il Field II 29:546-7 JI '19  
 Jersey sale at Kansas City. Sept. 20. Breeder's Gaz 74:490 S 26 '18  
 Jersey sales contradict inflation piffle. H. G. Van Pelt. il Dairy F 18:329+ Je 15 '21  
 Jersey week sales. il Field II 30:641-3 JI '20  
 Kahler sale fitting climax to the series. Jersey B 39:1416 Je 2 '20  
 Kingswood farm sale. Jersey B 39:1625 Je 23 '20  
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**Laws and regulations**

Loi créant au département de l'agriculture un bureau des marchés des produits agricoles; disposant pour la nomination du directeur des marchés et pour l'administration du dit bureau prescrivant ses devoirs et ses pouvoirs; prohibant le commerce de produits contrairement aux prescriptions de cette loi; établissant les peines en cas de violations; et allouant un crédit au bureau en Pennsylvanie. *Int Yearbook Ag Leg* 1917:733-5 '18

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Dairymen will show their best skill in National milk and cream contest. Weekly N L 6:5 Jl 16 '19

Drink of milk. A. Wenz. il Dakota F 39:1793 N 15 '19

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**National dairy show, 1919—Continued**

- Progress of milk from cow to consumer shown by U. S. at National dairy show. Weekly N L 7:5 O 1 '19
- 13th national dairy show, Chicago, Oct. 6-12. N Y Prod R 48:973+ O 1 '19; Breeder's Gaz 76:785-8 O 16 '19; Nat Stock & F 43:816+ O 18 '19; Penn State F 13:46+ N '19
- Victory dairy show. J: Day. il Prac F 115: 355+ N 1 '19
- Welfare work at show. O Judd Farmer 67: 580 O 18 '19
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- Wonderful show at Chicago. il Jersey B 38: 2053-5+ O 15 '19

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- Annual event surpasses previous shows in the number of exhibits and in convention work. N Y Prod R 50:1405 O 20 '20
- Awards in dairy products at the National dairy show. Creamery 9:31-3 N '20
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- Big plans for National dairy show. O Judd Farmer 68:1392 S 25 '20
- Boys and girls at the National dairy show. D. Guernsey. il Breeder's Gaz 78:934 N 4 '20
- Chautauqua of the cow. F. Crissey. il Country Gent 85:9+ O 2 '20
- Dairy industry's big exposition. Breeder's Gaz 78:824-5+ O 21 '20
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- Holiday dairy show—four breeds in the ring. S: R. Guard. il Breeder's Gaz 78: 1184-5 D 2 '20
- Honor kings and queens of dairymdom—some sidelights on National dairy show. Weekly N L 8:3 N 3 '20
- Many exhibitors meet at dairy show. O Judd Farmer 68:1535 O 23 '20
- National a fairylard of dairymdom. Jersey B 39:2893 O 20 '20
- National a milestone of dairy progress. il Farmer's Advocate 55:1825-6 O 21 '20
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- National dairy show as viewed by one of the general public. Creamery 9:49-51 O '20
- National dairy show, dairy cattle judging contest. Penn State F 14:42+ N '20
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- 1920 National dairy show; exhibits. il Hoard's D 60:648-52+ O 29 '20
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- Visit to the National dairy show. Ohio F 146: 495 O 23 '20

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- Department's exhibit at the National dairy show, Oct. 7-16. Hoard's D 59:1442 J 1 '20
- Government exhibit at the 1920 National dairy show. il U S Ag Dept C 139:1-16 '20; Same. Creamery 9:30+ N '20

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- 15th National dairy show, St Paul, Minn., Oct. 8-15. Nat Stock & F 45:698 O 22 '21; Farmer's Advocate 56:1630-1 O 27 '21; Dairy F 19:526-7+ N 1 '21; Field il 31:831-4 N '21
- Jerseys triumph at National dairy show. W. MacMonnies. il Jersey B 40:2627-31+ O 19 '21
- National dairy show. W. A. McKerrrow. Dakota F 41:725 Ag 1 '21; Same. N Y Prod R 52:790 Ag 3 '21
- National dairy show, St Paul, Minn., Oct. 8-15. N Y Prod R 52:1381+ O 19 '21; Dakota F 41:895+ N 1 '21

- National dairy show, St Paul, Minn., Oct. 8-15. J. E. Harper. Ohio F 148:389 O 22 '21
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- 1921 national dairy show to be held at St Paul, Minn., Oct. 8-15. Creamery 10:30 Je '21
- 1,000 cattle at the National dairy show. il Breeder's Gaz 80:592-3 O 27 '21
- Some of the possible benefits it offers to the buttermaker. N Y Prod R 52:1134+ S 28 '21

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- Meeting, Jacksonville, Fla., Dec. 3-6, 1918. Mrs J: M. Downer. Dakota F 39:802 My 1 '19

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- Farmers' equity union. F. Crissey. il Country Gent 84:15-16 Ag 2 '19
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- Co-operative livestock shippers meet in Chicago. E. J. Trosper. Am Coop J 14:14 N '19

- National federation of cooperative livestock shippers being organized. E. J. Trosper. Prog F 34:1938 N 22 '19

- New national federation: two thousand local shipping associations approve. E. J. Trosper. Dairy F 17:1105 D 1 '19

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Shippers' complete organization. O Judd Farmer 67:389 D 13 '19

**National federation of milk producers.** See National milk producers' federation

**National federation of potato exchanges**

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Convention; preliminary notices. il Am Fert 54:47-58 Je 4 '21

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Officers and committees, 1920-1921. Am Fert 53:77-9 S 11 '20

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Boston branch organized. Am Flor 54:596 Ap 3 '20

Cleveland meeting, Aug. 19, 1920. J. F. Ammann. Am Flor 55:101, 385 J1 31, S 4 '20

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4th quarterly meeting, Peoria, Ill., Oct. 18. Am Flor 57:722 O 29 '21

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Proposed constitution and by-laws. Am Flor 54:939-41 My 22 '20

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Grange history, a farm bureau guide. C. N. Kennedy. Wallaces' F 45:2844 D 24 '20

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National grape growers meet. Ohio F 147:120 Ja 22 '21

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26th annual convention. Detroit, Mich., July 16-18. Coop Manager & F 8:110 J1 '19

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National horticultural society of France. C. H. Payne. Gard Chron (Lond) 67:122 Mr 6 '20

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 Gow. Jersey B 39:207 F 4 '20  
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- Work of the agricultural league in 1919. Int  
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**National league for woman's service**

- Recognition of women by the army. R. Dean.  
 il Country Life 35:49-51 Ja '19

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- Meeting of the council, London, Feb. 2d.  
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- Palermo livestock show; over 1,300 short-  
 horns feature South America's leading ex-  
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**National lumber manufacturers' association**

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- Elaborate plans for New York dairy show.  
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 Milk and dairy farm exposition. Kimball's D  
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- Milk producers' federation holds highly suc-  
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- National milk producers meet. Hoard's D 60:  
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- Dairy shorthorn sale in U.S.A. Live Stock  
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 Conviction of Townley, C. R. Johnson. New  
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 North Dakota experiment. J. E. Pickett.  
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Unfamiliar scenes in national parks. H. W. Gleason. il Am For 27:343-55+ Je '21  
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Annual convention, Austin, Texas, Oct. 14. W: P. Bullard. Am Nut J 13:59 O '20  
Co-operative marketing of pecans. W: P. Bullard. Am Nut J 13:5 Jl '20  
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National pig breeders' association (English)

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National poultry, butter and egg association

Annual convention, Cleveland, O., Oct. 13-14. N Y Prod R 48:1201+ O 22 '19

Convention to be held at Cleveland, O., Oct. 13-14. N Y Prod R 48:976, 1057 O 1-8 '19

14th annual convention, Chicago, October 18-19. N Y Prod R 50:1489+ O 27 '20

15th annual convention, Chicago. N Y Prod R 52:1381+ O 19 '21

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Work of national assn.; a further report of the activities of the executive offices. N Y Prod R 52:1510-1 O 26 '21

National poultry conference (Canadian)

Meeting, Ottawa, Feb. 18-20. J Ag (Quebec) 22:174, 204 Ap-Mr '19

Report of conference at Ottawa, Feb. 18-20. 60p '19 Canada Ag

National poultry institute

Growth of National poultry institute. Reliable P J 28:273 Ap '21

National reconstruction congress

Conference of business men, Atlantic City. Am Fert 49:25-31 D 21 '18; Same cond. N Y Prod R 47:260 D 25 '18

National research council

Report of National research council for Society of American foresters. B. Moore. J For 19:173-4 F '21



**National research council—Continued****Forestry committee**

Report of the forestry committee, division of biology and agriculture, National research council. R. Zon. J For 19:175-7 F '21

**National rose society (English)**

Annual meeting, London. Gard Chron (Lond) 67:58 Ja 31 '20

Autumn show of the national rose society, held at Vincent Square, Westminster. Gard Chron (Lond) 70:176 O 1 '21

National rose. Gard Chron (Lond) 65:47 Ja 25 '19

National rose; exhibition held Apr. 7. il Gard Chron (Lond) 69:190 Ap 16 '21

National rose; exhibition held June 28. Gard Chron (Lond) 70:78 Ag 6 '21

National rose society. Gard Chron (Lond) 70:11-12, 38 Jl 2, 16 '21

Provincial show at Ipswich. Gard Chron (Lond) 70:51 Jl 23 '21

**National sheep breeders' association (English)**

19th International conference, Darlington, June 28. Live Stock J 92:31 Jl 2 '20

**National sheep conference**

2d conference, Philadelphia. Nat Stock & F 43:187 My 10 '19

Wool conference; second national conference at Philadelphia, April 29-30. Textile World (334 4th av, N.Y. \$3 per yr.) 55: 2707 My 3 '19

**National shorthorn congress show and sale**

4th annual shorthorn congress, Chicago, Feb. 22-24. il Wallaces' F 46:426 Mr 4 '21

National shorthorn congress. O Judd Farmer 66:441 Mr 8 '19

National shorthorn congress, Chicago, Feb., 18-20. il Dakota F 39:577- Mr 15 '19

Optimism keynotes shorthorn congress. Breeder's Gaz 79:421- Mr 3 '21

2d short-horn congress at Chicago draws big crowd; sale averages \$786. Wallaces' F 44: 546 F 28 '19

2d shorthorn congress show and sale, Chicago, Feb. 18-20. Breeder's Gaz 75:470-1 F 27 '19

Shorthorn congress and sale, Chicago, Feb. 22-24. Field II 31:276-7 Ap '21

Show held at Chicago, Feb., 18-20. il Field II 29:246-7 Ap '19

3d annual shorthorn congress, Chicago, Feb. 17-19. il Wallaces' F 45:698 F 27 '20

**National society for vocational education**

Proceedings of the joint convention of the National society for vocational education and the Vocational education association of the Middle West, Chicago, Feb. 19-21, 1920. (B. 32) 255p \$1 '20 Nat. soc. for vocational educ., 140 W. 42d st, N.Y.

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**National sweet pea society (English)**

Annual show, Vincent Square, July 12-13. Gard Chron (Lond) 70:39 Jl 16 '21

**National swine growers' association**

Annual meeting, Chicago, Dec. 1, 1919. Swine World 7:9 D 20 '19

Annual meeting, Chicago, Dec. 1, 1919. Swine World 6:10 D '18

National swine growers and its work. R. J. Evans. Swine World 7:29 Mr 20 '20

Organization of the swine industry. J. H. Haaga. Swine World 8:19-20 D 5 '20

Swine association has program. Cal Cultivator 54:962 Je 12 '20

Swine growers banquet largest ever held. Swine World 7:5 O 5 '19

What it stands for and what it is doing. Swine World 7:42 Je 20 '20

What the National swine growers association has done. E. C. Stone. Swine World 6:3-5 Ja '19

Work of the National swine growers association. W. J. Carmichael. Swine World 7:7-8+ Mr 5 '20

**National swine show**

All breeds strong at swine show. O Judd Farmer 67:522 O 11 '19

Fairs and shows in various states; 3d annual show, Cedar Rapids, Ia. Breeder's Gaz 74:597 O 10 '18

4th annual exhibition, Des Moines. Breeder's Gaz 76:725+ O 9 '19

4th annual National swine show and exposition goes to Des Moines. W. J. Carmichael. Swine World 6:6 Jl 5 '19

4th annual National swine show and its lessons. R. J. Evans. Swine World 7:20 O 5 '19

4th National swine show to be held at Des Moines, Iowa. E. Z. Russell. Swine World 7:26 Ag 20 '19

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Greatest of Poland China shows. M. S. McFadden. il Swine World 7:5a-16a+ O 5 '19

Greatest show of its kind. L. T. Wells. Prog F 34:1636 O 11 '19

Greatest show of the breed assembles more than one thousand premier pure breeds. R. V. Hoffman. il Field II 29:918-20+ N '19

Hog exhibit that sets standards; the 5th annual National swine show. Breeder's Gaz 78:758-9 O 14 '20

National for all. A. R. Simpson. Swine World 7:7 O 5 '19

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National swine show. J. T. E. Dinwoodie. Dakota F 39:1698+ N 1 '19

National swine show and exposition. il Wallaces' F 44:1984-5 O 10 '19

National swine show at Des Moines. Wallaces' F 44:1354 Jl 11 '19

National swine show awards. O Judd Farmer 67:536 O 11 '19

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National swine show, Des Moines, Sept. 29-Oct. 4. Nat Stock & F 43:827 O 18 '19

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National swine show greater than ever. il Swine World 8:3-4 S 20 '20

National swine show: list of awards. il Wallaces' F 45:2424+ O 15 '20

National swine show, Peoria, Ill., 1921. il Field II 31:838-9+ N '21

National swine show rules for year 1920. Swine World 7:10 Ap 20 '20

1919 National swine show. W. J. Carmichael. Swine World 6:21 My '19

1919 show; exhibitors and awards. il Wallaces' F 44:1990-2 O 10 '19

Peoria probable location for 1921. Swine World 8:18 Ja 5 '21

Poland Chinas at the National. W. M. McFadden. il Swine World 7:6 O 5 '19

Reflections from the National swine show. W. J. Carmichael. Swine World 7:6 O 20 '19

Rules governing National swine show of 1919. Swine World 6:22 Je '19

Rules governing the national swine show. Swine World 9:38 Ag 5 '21

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Some interesting facts about the swine industry. Swine World 8:12 Ag 20 '20

Some surprises at National swine show. O Judd Farmer 69:859 O 15 '21

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4th annual national tractor show. Kansas City. il Motor Age (59 E. Madison st, Chicago 15c) 35:10-11+ F 27 '19

5th national tractor show. G. H. Alford. Prog F 35:450 F 28 '20

5th national tractor show, Kansas City, Feb. 16-21. il Am Thresherman 22:22 F; 10-11 Mr '20

Kansas City tractor show. I. W. Dickerson. il Wallaces' F 45:694 F 27 '20

Kansas City tractor show. F. M. White. Dakota F 39:552 Mr 15 '19

Kansas City tractor show a big success. Wallaces' F 44:597 Mr 7 '19

National tractor demonstration. il Am Coop J 14:8 Ag '19

National tractor demonstration. Dakota F 39: 1164 Ag 1 '19

**National tractor show—Continued**

- National tractor demonstration. W. Aitken-head. *Am Fruit Grower* 39:28 S '19
- National tractor demonstration. I. W. Dickerson. *il Wallaces' F* 46:946 J1 S '21
- National tractor demonstration. F. M. White. *il Hoard's D* 58:156 Ag 22 '19
- National tractor demonstration. July 14-19. *Am Thresherman* 22:66 J1 '19
- National tractor show. Feb 7-12. *il Penn State F* 14:209 Mr '21
- National tractor show dates at Los Angeles. Sept. 20-26. *Cal Citrograph* 5:329 Ag '20
- National tractor show of the West. *il Cal Cultivator* 55:429+ O 2 '20
- National tractor show sets a new world's record in farm power exhibits. *il Am Thresherman* 21:7 Mr '19
- National tractor show to be set in scene of natural beauty. *Cal Citrograph* 5:295 J1 '20
- New models and strong representation of parts makers at Kansas City tractor show. *Automotive Industries* (231 W. 39th st. N.Y. 15c) 40:494+ F 27 '19
- Notes from the National tractor show. G. H. Alford. *Prog F* 34:1245 Ag 2 '19
- Regulations that will govern exhibits and tests at National tractor event. July 14-19. *Motor Age* (59 E. Madison st. Chicago. 15c) 85:17 Je 12 '19
- Significance of the National tractor show. F. W. Ives. *Ohio F* 147:70 Ja 15 '21
- 6th annual show. Columbus, O. *Nat Stock & F* 44:1458 F 19 '21; *Ohio F* 147:251 F 19 '21
- Still tractor show receives general approval. *il Cal Citrograph* 6:14-15+ N '20
- Worthy merchandising features at Kansas City tractor show. D. Beecroft. *il Automotive Industries* (231 W. 39th st. N.Y. 15c) 40:519-21 Je 6 '19

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- How school children study trees. S. S. Alburttis. *il map Am For* 27:291-8 My '21
- Washington schools vote for the oak as the national tree. *il Am For* 27:169-72 Mr '21

**National utility rabbit association (British)**

- Associations for keeping and breeding rabbits. *Int R Ag Econ* 9:no 8:634-6 Ag '18

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- Report of delegate to National vegetable growers' association. H. W. Ruble. *Minn Hort* 48:92 Mr '20

**National war emergency poultry federation**

- Final report of National war emergency poultry federation. R. V. Hicks and H. R. Lewis. *Reliable P J* 26:490 J1 '19

**National western live stock show**

- Calves and ribbons. G. F. Stratton. *il Country Gent* 84:9 Ap 5 '19
- National western stock show. *Breeder's Gaz* 75:285 F 6 '19
- 13th National western stock show. Denver. *Breeder's Gaz* 77:250-1 Ja 29 '20; *Field II* 30:196-7 Mr '20
- 15th annual show. Denver. Colo. Jan. 15-22. *Breeder's Gaz* 79:163-5 Ja 27 '21; *Field II* 31:192-3+ Mr '21
- Shorthorns at Denver. *il Field II* 29:180 Mr '19
- Winter show in Denver. *Breeder's Gaz* 75:222 Ja 30 '19

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- Birth of the National wool growers' association. *Nat Wool Grower* 10:29 D '20
- 56th annual convention. Salt Lake city. Jan. 19th. *Nat Wool Grower* 11:11-12 F '21
- Ram sale and the convention. *il Nat Wool Grower* 10:13-14 S '20
- Report of resolutions committee. *Nat Wool Grower* 11:16-17+ F '21
- Resolutions adopted at the Wool growers' convention. *Am Sheep B & W* 41:67-8 F '21
- Resolutions adopted by 55th annual convention. *Nat Wool Grower* 10:36-7 Ja '20
- Same. *Am Sheep B & W* 40:115-16 F '20
- Special and joint convention of wool growers and cattle raisers. *Nat Wool Grower* 11:19-22 S '21
- Statement of the Secretary. *Nat Wool Grower* 10:30 Ap '20

- Wool growers speak out. G. F. Stratton. *Country Gent* 85:13+ Mr 20 '20

**National zoological park**

- Pictures and plants for Christmas. R. W. Shufeldt. *il Am For* 24:748-50 D '18

**Natural gas. See Gas, Natural**

**Natural history**

- Animal habitat groups. B. W. Evermann. *il Am For* 27:208-15 Ap '21
- Influence of man on animal life in Scotland. J. A. Thomson. *Scottish J Ag* 4:28-31 Ja '21

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- Nations and their raw materials. *Ag News* 20:305-6 O 1 '21

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- Role of selection in evolution. W. E. Castle. *Sci Am Sup* (233 Broadway, N.Y. 10c) 87:66-7, 90 F 1-8 '19

*See also Evolution; Species*

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- Back to nature? never! forward to the machine. E. E. Slosson. *Independent* (119 W. 40th st. N.Y. 15c) 101:5-6+ Ja 3 '20
- Cinematograph of nature. W. Thompson. *il Farmer's Advocate* 55:2098 D 9 '20
- February—and plant-life still sleeps in northern climes. R. W. Shufeldt. *il Am For* 25:868-74 F '19
- Inter-relations in nature. W. Lochhead. *il Sci Ag* 1:19-23 Ja '21
- Is nature beneficent? J. Burroughs. *Yale R* (120 High st. New Haven, Conn. 75c) n s 9:366-78 Ja '20
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- Notes of a naturalist. J. Burroughs. *Scribners M* (597 5th av. N.Y. 35c) 66:696-702 D '19
- Stock taking. W. T. Clark. *il Overland* (259 Minna st. San Francisco 20c) n s 75:198-202 Mr '20
- Summer walks in the woodland along the Palisades in the Interstate park. J. O. Swift. *il Am For* 25:1358-60 S '19
- Walks in the woods; around Robin Hood's barn to the Grassy Sprain wood. J. O. Swift. *il Am For* 25:1009-11 Ap '19
- Walks in the woods; the Nepperhan Valley in winter time. J. O. Swift. *il Am For* 25:853-5 F '19
- Walks in the woods with Washington Irving along the Croton aqueduct. J. O. Swift. *il Am For* 25:1066-8 My '19
- Will in nature. A. W. Tilby. *Edinburgh R* (249 W. 13th st. N.Y. \$1.50) 231:284-302 Ap '20

**Nature in art. See Flowers in art**

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- Plants and flowers in Chinese poetry. Gard Chron (Lond) 69:111 Mr 5 '21
- Plants and flowers in Chinese poetry. A. Arber. *Gard Chron* (Lond) 69:163 Ap 2 '21

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- Nature photography. R. W. Shufeldt. *il Am For* 27:77-86 F '21

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- Do you like to paddle in the water? (v. 14. no. 2) 123-58p *il* '20 Cornell rural school leaflet, Ithaca, N.Y.
- June days in field and forest. R. W. Shufeldt. *il Am For* 27:394-9 Je '21
- Life in ponds and marshes. R. W. Shufeldt. *il Am For* 27:299-306 My '21
- Nature adventures in the nation's capital. R. W. Shufeldt. *il Am For* 26:228-34 Ap '20
- Nature guides. C. M. Goethe. *Survey* (112 E. 19th st. N.Y. 15c) 44:145 Ap 24 '20
- Nature studies in small areas. R. W. Shufeldt. *il Am For* 26:273-8 My '20
- Nature study and primary geography for the public schools of British Columbia. 48p bibliog '19 British Columbia Dept. of educ., Victoria
- Nature study in camp. R. S. Musselman. *Assn Men* (Rural Manhood ed.) 46:55 My '21



**Nature study—Continued**

- Nature study in our public schools. R. W. Shufeldt. *il Am For* 27:717-23 N '21
- Nature study in relation to agriculture. J. J. Robinson. *Ag Gaz of Canada* 7:158-9 F '20
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- Self-improvement. E. M. Jacobs. *Nat Stock & F* 43:536 Ag 16 '19
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- Training little children. B. Lewis. *Am Thresherman* 22:33 Jl '19
- Tramps through the Gulf states. R. W. Shufeldt. *il Am For* 26:489-95, 540-6 Ag-S '20

*See also* Botany; School gardens

**Naugatuck valley, Connecticut**

- Damage to forests and other vegetation by smoke, ash and fumes from manufacturing plants in Naugatuck valley, Connecticut. J. W. Toumey. *il J For* 19:367-73 Ap '21

**Nauru island**

- Important British fertilizer transaction. *Am Fert* 54:52 Ap 23 '21
- Nauru and Ocean islands; story of the phosphate discoveries and workings. A. F. Ellis. *il maps J Ag New Zealand* 21:297-317 D '20
- Nauru and Ocean islands; their phosphate deposits and workings. H. B. Pope. *il maps J Dept Ag Victoria* 19:449-69 Ag '21
- Nauru and other phosphate islands in the Pacific. J. G. Wilson. *J Ag New Zealand* 19:395-6 D '19
- Nauru island and its phosphate. *Am Fert* 51:86 O 11 '19

**Naval education**

*See also* Great Lakes naval training station

**Naval stores**

- Standard grades of naval stores; hearings before the committee on agriculture and forestry United States Senate; 66th Congress, 1st session on S. 1351. 95p '19 U.S. Congress, Senate com. on ag. and forestry, Washington, D.C.

What are naval stores? *Sci Am* (233 Broadway, N.Y. 10c) 121:328 S 27 '19

**Navel ill. See Horses—Diseases and pests****Navicular disease. See Horses—Diseases and pests****Navigation**

- Power boat pathfinder. A. F. Loomis. *il maps Country Life* 37:66-9+ Ap; 38:120+ My; 116+ Je; 92+ Jl; 104+ S '20

**Nebraska**

- Co-operative movement in Nebraska. M. H. Wesen. *J Political Econ* (Univ. of Chicago press, Chicago 50c) 28:477-98 Je '20

*See also* subhead Nebraska under special subjects, e.g. Agriculture—Nebraska, Dairying—Nebraska

**Agriculture, State board of**

- Annual report for the year 1918. *il Neb Ag Bd Rep* 1918:1-240

**Education**

- Rural teacher of Nebraska. (B. 20) 67p '19 U.S. Bur. of educ., Washington, D.C.

**Food, drug, dairy and oil commission**

- Biennial report for the period from Dec. 1, 1916-Nov. 30, 1918. 58p '18 Neb. Food, drug, dairy and oil comm., Lincoln

**Game and fish commission**

- Biennial report for the two years ending Dec. 31, 1918. 111p *il* '19 Neb. Game and fish comm., Lincoln

**Public lands and buildings, Department of**  
21st biennial report of the Commissioner of public lands and buildings, and of the secretary of the Board of educational lands and funds, Dec. 1, 1918. 79p '19 Neb. Dept. of public lands and bldgs., Lincoln

**Nebraska agricultural experiment station**

- 32d annual report. *Neb Ag Exp Rep* 1918:1-44 '19
- 33d annual report. *Neb Ag Exp* 49p '20
- 34th annual report, 1921. *Neb Ag Exp Rep* 1921:1-54

**Nebraska dairymen's association**

- Annual report for the year 1919. 129p *il* '20 Neb. Dairymen's assn., Lincoln
- Nebraska dairymen in 36th annual convention. W. F. Dobbins. *Hoard's D* 61:22 Ja 21 '21
- Nebraska dairymen meet. W: V. Dobbins. *Hoard's D* 59:134 F 6 '20

**Nebraska farm bureau federation**

- Annual meeting, Lincoln, Jan. 6-7. Wallaces' *F* 46:58 Ja 14 '21

**Nebraska farmers' cooperative grain and livestock association**

- 17th annual convention, Omaha, Nov. 18-20. *Am Coop J* 14:3-5+ D '19
- 18th annual convention, Omaha, Nov. 16-18, 1920. *Coop Manager & F* 10:44-5 D '20
- Hold fine convention in Omaha, Nov. 18-20. *Coop Manager & F* 9:38-48 D '19
- Nebraska farmer grain dealers vote to form grain commission company. *Am Coop J* 15:30+ D '20

**Nebraska farmers' union**

- Farmers' commission company. D. R. Murphy. *il Wallaces' F* 45:2237+ S 24 '20
- Farmers' union of Nebraska. C. H. Gustafson. *il Wallaces' F* 45:80 Ja 2 '20
- Farmers' union of Nebraska. J. H. Tubbs. *Rural N Y* 79:111 Ja 17 '20
- Nebraska's great farmers' union. R. P. Crawford. *il Country Gent* 84:5+ Jl 12 '19

**Nebraska milk producers' association**

- Meetings held at Lincoln and Omaha during the first week in January. H. T. Dobbins. *Hoard's D* 57:38 Ja 24 '19

**Nebraska potato improvement association**

- 1st annual report, 1919. 160p *il maps* \$1 '20 Neb. potato improvement assn., Lincoln
- 2d annual report, 1920. 116p *il maps* \$1 '20 Neb. potato improvement assn., Lincoln

**Nebraska semi-centennial fair**

- Nebraska fair at Lincoln. *Breeder's Gaz* 43:389 S 12 '18

**Nebraska state fair**

- Fall fairs and shows; annual fair, Lincoln. *Breeder's Gaz* 76:537-8 S 18 '19

Nebraska holds her state fair. *Wallaces' F* 46:1166 S 16 '21

Nebraska live stock show; list of awards. *il Wallaces' F* 44:1756+ S 12 '19

Nebraska state fair, *il Wallaces' F* 44:1746 S 12 '19

Nebraska state fair. W. V. Dobbins. *il Hoard's D* 62:282 S 30 '21

Nebraska state fair at Lincoln. *Breeder's Gaz* 80:377-9 S 15 '21

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Nebraska's state fair a big success. *il Breeder's Gaz* 78:517-19 S 16 '20; *il Wallaces' F* 45:2177-9 S 17 '20

1920 Nebraska prosperity fair. W. A. Dobbins. *il Hoard's D* 60:425 O 1 '20

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# Ohio

See also subhead Ohio under special subjects, e.g. Agriculture—Ohio, Dairying—Ohio

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Meeting, Columbus, June 20. Am Coop J 15:4 Je '20

# Ohio farmers' cooperative milk company

Jailing Ohio's milk producers. C. W. Holman. Am Coop J 14:7-9+ S '19

# Ohio farmers' defense league

Organization meeting, Columbus, Jan. 1919. Nat Stock & F 42:1064 F 1 '19

# Ohio farmers' grain dealers' association

4th annual convention, Toledo, Feb. 25-26. Am Coop J 14:271-8 Mr '19; Coop Manager & F 8:46-50 Ap '19

5th annual convention, Toledo, Feb. 24-25. Coop Manager & F 9:36-42 Ap '20

6th annual convention, Cleveland, Feb. 22-23. Ohio F 147:342 Mr 5 '21; Am Coop J 16:18-19+ Ap '21

Ohio association makes wonderful progress. M. W. Pickell. Am Coop J 14:19 S '19

Ohio endorses collective buying; biggest convention ever held in state. Am Coop J 15:7-9+ Mr '20

Resolutions passed at convention. Coop Manager & F 8:74 Ap '19

# Ohio Guernsey breeders' association

Guernsey breeders meet, Gates Mill, June 4. Ohio F 143:944 Je 21 '19

# Ohio Jersey cattle club

Annual field day, Salem, June 26. Jersey B 38:1386 Jl 23 '19

Meeting, Columbus, Jan. 29. Jersey B 38:215 F 5 '19

# Ohio seed improvement association

Do we need a seed improvement association? F. S. Prince. Ohio F 143:723 My 3 '19

Ohio seed improvement asso'n. W. E. Hanger. Ohio F 143:782 My 17 '19

# Ohio sheep and wool growers' association

Annual meeting, Columbus, Jan. 27. J. F. Walker. Nat Stock & F 43:1389 F 7 '20;

Same. Am Sheep B & W 40:199 Mr '20

Marketing Ohio wool. J. F. Walker. Ohio F 143:973 Je 28 '19

Ohio wool growers' cooperative movement. C. S. Plumb. il Nat Stock & F 43:562 Ag 23 '19

To Ohio wool growers. G. M. Wilber. Nat Stock & F 43:67 Ap 12 '19; Same cond. Ohio F 143:656 Ap 19 '19

Truth about the Ohio wool pool. J. F. Walker. Am Sheep B & W 41:496-7 O '21

What is the Ohio sheep and wool growers' association? J. F. Walker. Am Sheep B & W 40:469 Jl '20

Wool growers' conference. Nat Stock & F 42:1293 Mr 15 '19

# Ohio state dairymen's association

Ohio state dairymen meet. Ohio F 143:202 F 8 '19

# Ohio state fair

Buckeye sheep show breaks records. il Am Sheep B & W 39:609-13+ O '19

Buckeye state's greatest show. Breeder's Gaz 78:456-61 S 9 '20

Dairy exhibit at the Ohio state fair. F. C. Dean. N Y Prod R 48:922 S 17 '19

Home stock dominates Ohio's fair. Breeder's Gaz 80:336-8 S 8 '21

1919 state fair. C. M. Baker. il Hoard's D 58:329 S 19 '19

Ohio dairy cattle. J. Andrews. Dairy F 18:788 S 15 '20

Ohio Jerseys strong at the fair. Jersey B 38:1645-6 S 3 '19

Ohio state fair. Ohio F 148:227+ S 10 '21

Ohio's fair makes live stock record. Breeder's Gaz 74:349-53 S 5 '18

Ohio's great state fair. Nat Stock & F 44:709+ S 11 '20; il Ohio F 146:299+ S 11 '20

Ohio's seventy-first state fair. Nat Stock & F 45:578 S 10 '21

Poland Chinas at Ohio. il Swine World 7:9-12 S 5 '19

Real quality Jerseys at the Ohio state fair. il Jersey B 39:2373 S 8 '20

69th annual fair. Breeder's Gaz 76:413-15+ S 4 '19; Nat Stock & F 43:616-17+ S 6 '19;

Ohio F 144:259+ S 6 '19

70th annual fair, Columbus, Aug. 31-Sept. 4. C. M. Baker. il Hoard's D 60:382 S 24 '20

State fair horse show. Ohio F 146:334 S 18 '20

State fair wool exhibit. H. P. Miller. Ohio F 144:331 S 20 '19

**Ohio state grange**

- Competition or cooperation—which? Nat Stock & F 44:542 O 9 '20  
46th annual session, Canton, Dec. 10-12. Ohio F 142:617 D 21 '18  
46th (?) annual session, Columbus, Dec. 9-12, 1919. Ohio F 144:774 D 20 '19  
48th annual meeting, Cleveland, Dec. 14-16. Nat Stock & F 44:1180 D 25 '20; Ohio F 146:747+ D 25 '20  
Grange and taxation. L. J. Taber. Nat Stock & F 42:1062 F 1 '19

**Ohio state Holstein-Friesian breeders' association**

- Ohio Holstein breeders organized. R. C. Pollock. Hoard's D 58:1128 Ja 2 '20

**Ohio state horticultural society**

- Annual meeting, Ohio state university. W. I. Chamberlain. Ohio F 145:266 F 14 '20  
52d annual meeting, Jan. 28. Nat Stock & F 42:1103 F 8 '19; Ohio F 143:206 F 8 '19  
Ohio horticulturists meet. Ohio F 147:216 F 12 '21  
Rome beauty memorialized. Ohio F 144:119 Ag 2 '19  
Summer meeting. R. B. Cruickshank. Nat Stock & F 43:498 Ag 9 '19; Rural N Y 78:1210 Ag 16 '19  
Summer visit in Lake county. il Am Flor 55:320 Ag 21 '20

**Ohio state university**

**Extension service**

- Annual report, July 1, 1919-June 30, 1920. il maps Ohio Ag Ext C v no 7:1-100 '20-'21

**Ohio state veterinary medical association**

- 36th annual meeting, Columbus, Ohio, Jan. 9-10. Am Vet M Assn J 54:663-4 F '19

**Ohio Swiss cheese association**

- Annual meeting, Sugar Creek, May 24. F. C. Dean. N Y Prod R 48:226 Je 4 '19; Ohio F 143:917 Je 14 '19

**Ohio vegetable growers' association**

- Meeting at Columbus. L. M. Montgomery. Ohio F 143:254 F 15 '19  
Ohio growers in annual session, Feb. 2-3. Market Growers J 28:118 F 15 '21  
Ohio state meeting topics. Market Growers J 28:160 Mr 1 '21  
Ohio vegetable growers. Ohio F 145:370 F 28 '20  
Ohio vegetable growers' convention. L. M. Montgomery. Market Growers J 24:133-4 F 15 '19  
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Organization drive in Ohio. C. W. Waid. Market Growers J 26:148 F 15 '20

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- Supply, the price, and the quality of fuel oils for pump irrigation. G. E. P. Smith. il Ariz Ag Exp B 92:397-423 '20; Conclusions. Exp Sta Record 45:80 Jl '21

**Oil burners**

See also Kerosene torches

**Oil cakes.** See Feeding and feeding stuffs—Oil cakes

**Oil extraction**

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- Efficient oil stove. M. Howard. Rural N Y 80:386 Mr 5 '21  
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- How to test oils. W. Virgin. Am Thresherman 24:12 My '21

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Oklahoma farmers' cooperative grain dealers' association

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Oklahoma free state fair

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Good breeding tells in net results; Oklahoma free fair, Muskogee. Breeder's Gaz 80:558 O 20 '21

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Oklahoma grain dealers' association

Convention, Oklahoma City, May 20-21. Coop Manager & F 8:96 Jl '19

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Old man Crabtree and the native son; story. F. Tilden. il Country Gent 86:8-9+ Ja 1 '21

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More oleo discussion. H. C. Bennett. Rural N Y 80:393 Mr 5 '21

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**Analysis**

- Scientist experiments on butter and oleos. Jersey B 39:1644 Je 23 '20

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See Color of birds

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See also Botany; Ethnology; Evolution;  
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- Sale of Mr J. L. Shirley's shorthorns. Live Stock J 92:396 O 15 '20
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*See also* subhead Siberia under special subjects, e.g. Cooperation—Siberia. Crops—Siberia

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South Dakota animal health laboratory. G. S. Weaver. il Am Vet M Assn J 59:668-72 Ag '21

**South Dakota beekeepers' association**

Beekeepers hold annual meeting. Dakota F 41:441 Ap 1 '21

**South Dakota brotherhood of threshermen**

Annual convention, Mar. 15-17. Am Thresherman 23:22 Ap '21

3d annual convention, Sioux Falls, March 18-19. Am Thresherman 21:70 Mr '19

**South Dakota cooperative elevator managers association**

Annual convention, Sioux Falls, July 8, 1920. Coop Manager & F 9:56-7 Ag '20

**South Dakota corn and grain growers' association**

Corn and grain growers' meeting and show, Feb. 4-6. Dakota F 40:434 F 15 '20

Corn and grain show at Yankton, S. D. A. T. Evans. Dakota F 41:252 F 15 '21

S. D. corn and grain growers to discuss labor problem. Dakota F 39:86 Ja 15 '19

**South Dakota dairy association**

15th annual convention, Sioux Falls, Mar. 23-24. N Y Prod R 51:1164 Mr 30 '21

Meeting, Sioux Falls, Mar. 23-24th. Dakota F 41:435 Ap 1 '21

State dairy association meets. Dakota F 40:906 Ap 15 '20

13th annual convention, Brookings, April 2-3. C. Larsen. Dakota F 39:709a Ap 15 '19

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**South Dakota experiment association**

Experiment association secretary's report. M. Champlin. Dakota F 39:1106 JI 15 '19

7th annual meeting, Mar. 19, Brookings, S. D. Dakota F 39:622 Ap 1 '19

**South Dakota farm bureau federation**

3d annual meeting, Brookings, Jan. 25-27. Wallaces' F 46:285 F 11 '21; Dakota F 41:246 F 15 '21

246 F 15 '21

**South Dakota farm women's congress**

2d annual session, Mitchell, June 23-24. Dakota F 41:690-1 JI 15 '21

**South Dakota farmers' grain dealers' association**

12th annual convention, Sioux Falls, Dec. 10-12. Am Coop J 14:152+ Ja '19; Coop Manager & F 8:38+ Ja '19

13th annual convention, Aberdeen, Jan. 13-16. il Am Coop J 15:5-9+ F '20; Dakota F 40:436 F 15 '20; Coop Manager & F 9:36-49 F '20

**South Dakota federation of livestock shipping associations**

2d annual convention, Huron, Feb. 23d. Dakota F 41:410 Mr 15 '21

South Dakota federation of live stock shippers organize at Sioux Falls, March 19, 1920. Coop Manager & F 9:108-9+ Ap '20

**South Dakota Holstein-Friesian association**

Annual meeting, Huron, Dec. 4, 1919. H. Jones. Hoard's D 58:1145 Ja 2 '20

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Meeting, Sioux Falls, Mar. 24. N Y Prod R 51: 1240 Ap 5 '21
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Mitchell livestock meeting. J: T. E. Dinwoodie. il Dakota. F 40:438-438a F 15 '20
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With the livestock men at Mitchell. A. Wenz. Dakota F 39:170 F 1 '19
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First annual meeting, Huron, June 22. R. C. Jensen. Swine World 7:15 Jl 5 '20
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1st annual meeting, Aberdeen, Mar. 18. Dakota F 39:639 Ap 1 '19
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Big year ahead at South Dakota state college. il Dakota F 39:1301 S 1 '19  
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6th annual meeting, Sioux Falls, May 27. Dakota F 39:1022 Je 15 '19
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South Dakota woolgrowers organize. Dakota F 40:914 Ap 15 '20
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- Southeastern compress association**  
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*See* Growth (plants)

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- Preliminary note on triphleps tantilus, Motsch.: an enemy of the pink boll-worm. E. Ballard. Ag J of India 16:571-2 S '21

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**Tri-state fair (Aberdeen)**

- Tri-state fair's initial exposition at Aberdeen, S.D., Sept. 5th-9th. il Dakota F 41: 792 S 15 '21



**Tri-state florists' association**

1st regular meeting, Fargo, N.D. and Moorhead, Minn., June 24-25. *Am Flor* 56:1132 J1 2 '21

**Tri-state forestry conference**

Exhaustion of woodlands imminent in three states; conference to be held in Indianapolis, Oct. 22-23. *Weekly N L* 7:5 N 5 '19

**Tri-state grain and stock growers' convention**

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With the grain growers at Fargo. H. H. Biggar, Dakota F 41:162+ F 1 '21

**Tri-state mutual grain dealers' fire insurance company of Luverne, Minnesota**

Bit of history. E. H. Moreland. *Coop Manager* & F 8:51 Ja '19

**Tri-state sheep and wool growers' association**

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table growers' association, Massachusetts  
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gan potato growers' exchange, Montserrat  
onion growers' association, New York state  
potato growers' association, New York  
state vegetable growers' association, North  
Jersey gardeners' association, Ohio vege-  
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table growers' association, Potato associa-  
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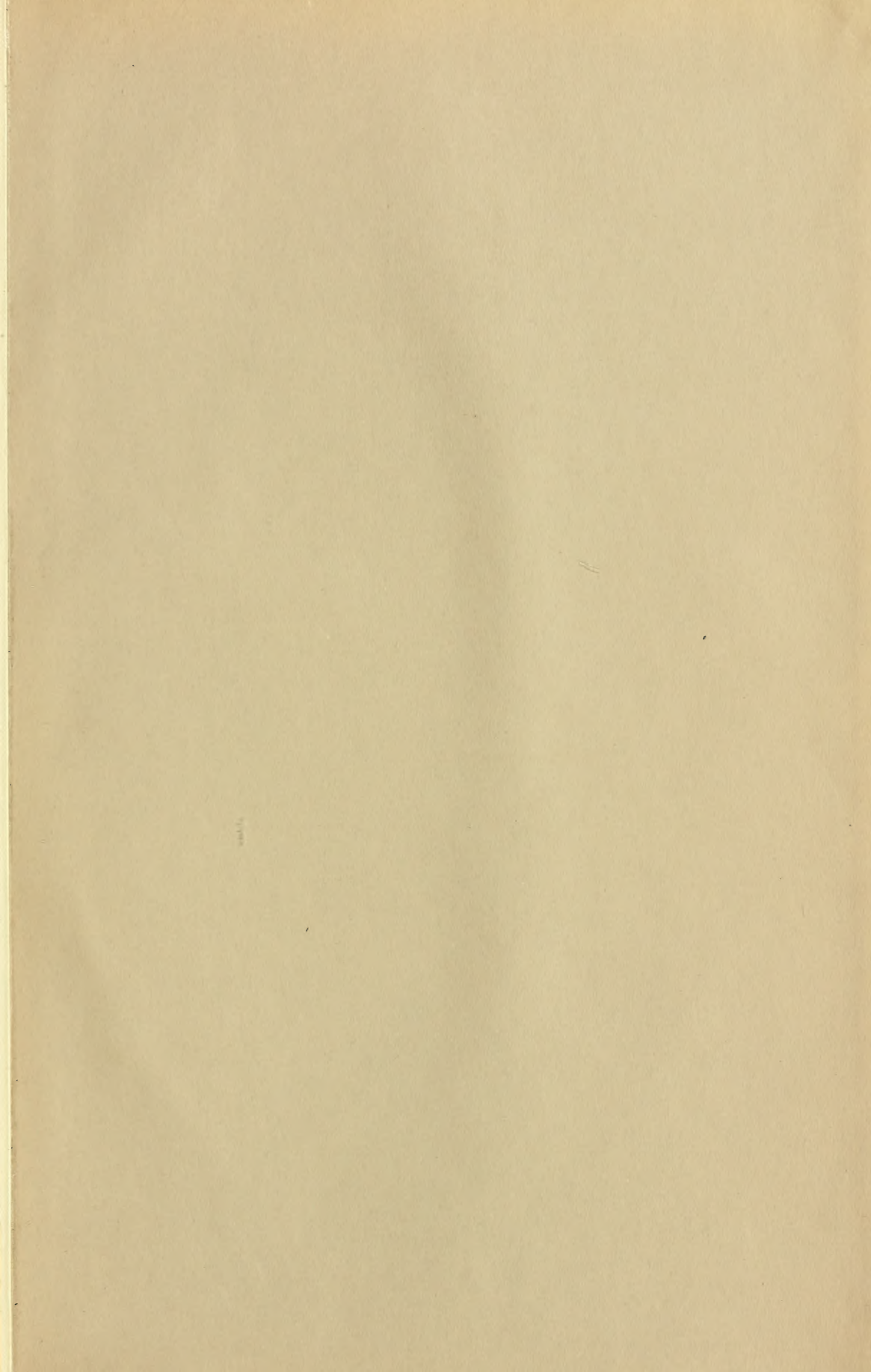
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